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RESEARCH AND DEVELOPMENT CENTER**

Bethesda, Md. 20884



**DEPOT MAINTENANCE PLANNING AND PROGRAMMING  
SYSTEM MAJOR SHIP ALTERATION DATA BASE**

by

Paul Hinkel III

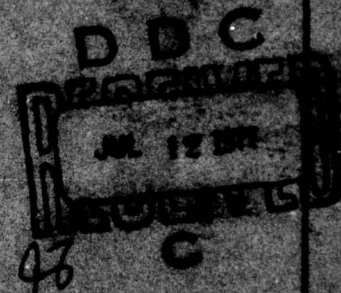
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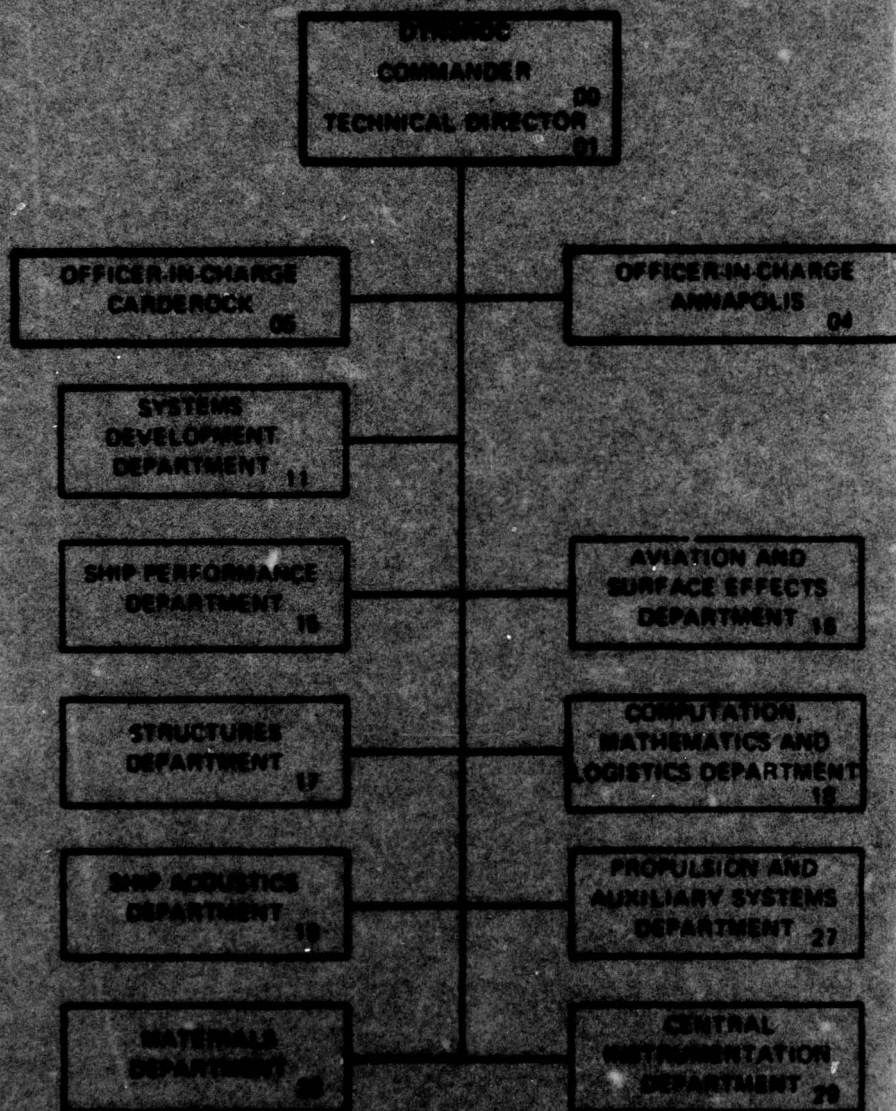
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# ABSTRACT

The Depot Maintenance Planning and Programming System (DMPPS) is a means of projecting shipyard requirements for manpower and material by production shop category and Ship Work Breakdown Structure (SWBS). Development of DMPPS included the development of computer programs and data bases describing both repair and alteration type work. This report presents the results of the initial effort to develop the ship alteration data base for all ship types except carriers.

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## 1. INTRODUCTION

The Depot Maintenance Planning and Programming System (DMPPS) is being developed by the Naval Sea Systems Command (NAVSEA) to project shipyard requirements during a five-year period for manpower and facilities by production shop category and Ship Work Breakdown Structure (SWBS). The DMPPS was developed in response to DOD Instruction 4151.15 which requires reports by shops and by SWBS. The cognizant code within NAVSEA is Code 0713, the Depot Maintenance Planning Branch. The David W. Taylor Naval Ship Research and Development Center (DTNSRDC) has provided support to NAVSEA in the development of computer programs and in the construction of the data bases. Documentation of the computer programs and a description of the overall system will be contained in a DTNSRDC report<sup>1</sup> which is currently in preparation.

The development of the data bases was divided into separate efforts for repair and alterations type work. A large part of the repair portion of an availability (scheduled ship overhaul) for a given ship is repeatable from availability to availability. Since the repair work is repeatable, future repair work can be projected from past repair work. Therefore, the repair data base was developed from data on completed availabilities (historical data).

The alteration portion of an availability is composed of many separate alterations, which are not repeatable on the same ship. However, within the same class of ship alterations are repeatable. Therefore, the ship alteration data base was developed by collecting data on individual ship alterations for each ship class. The total of the individual ship alterations was then used to project the alteration portion of an availability.

The alteration data base development effort was further divided into two tasks, one covering carriers (CV's and CVN's) and the other covering all other ship types. This report presents the results of the initial effort to develop the ship alteration data base for ships other than carriers.

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1. Lamatrice, L., J. St. Laurent and M. Lamatrice, "Depot Maintenance Planning and Programming System (DMPPS) - System Description", DTNSRDC report in preparation.

## 2. TASK DESCRIPTION

### 2.1 OBJECTIVE

The objective of this task was to develop a computerized ship alteration (SHIPALT) data base for use in the DMPPS. Data for each SHIPALT included in the data base would consist of the ratio of manhours in each production shop to the total manhours.

### 2.2 PRODUCTION SHOPS

Each production shop in a Naval Shipyard is identified by a title and a number, as listed in NAVSHIPINST 5450.152A. NAVSEA selected the shops shown in Table 1, which have either the largest workload or the most critical functions, for analysis in the DMPPS.

TABLE 1 - STANDARD SHOP NUMBERS

<u>SHOP NUMBER</u>	<u>TITLE</u>
06	CENTRAL TOOL
11	SHIPFITTERS
17	SHEETMETAL
23	FORGE
26	WELDING
31	INSIDE MACHINE
36	WEAPONS
38	OUTSIDE MACHINE
41	BOILER
51	ELECTRICAL
56	PIPE
64	WOODWORKING
65	MODULE REPAIR
67	ELECTRONICS
71	PAINT
72	RIGGERS
81	FOUNDRY
94	PATTERN
99	TEMPORARY SERVICES

Work performed in shops not listed were combined into a group called "OTHER", giving a total of 20 entries for each SHIPALT (19 production shops and OTHER).

### 2.3 SAMIS

The Ship Alteration Management Information System (SAMIS), developed by NAVSEA 042, is the DMPPS's primary source of scheduled ship alterations. SAMIS lists all shipyard availabilities for the five-year period considered by DMPPS and all programmed alterations for each availability. Therefore, all SHIPALTS for which data are required are listed in SAMIS.

The information listed in SAMIS includes ship type, ship class, ship alteration number, ship alteration type, alteration description, and man-days required. The alterations listed in Section 4 of this report were extracted from the February 1976 SAMIS.

At the end of FY76, SAMIS contained approximately 17,000 programmed alterations, many estimated to require only a few hundred man-days. To collect and analyze data for the complete list was not practical. Therefore, NAVSEA decided to limit the number of alterations requiring detailed shop data. A study of the distribution of alterations versus man-days indicated that it would be sufficient to collect detailed shop data only for alterations estimated to require 750 or more man-days. These alterations comprise approximately 20% of the total alterations list and 80% of the man-days. Alterations requiring 750 or more man-days were defined as major alterations and alterations of less than 750 man-days as minor alterations. This breakdown led to processing the alterations listed in SAMIS in two different ways.

#### 2.3.1 Major Alterations

The data base described in this report contains information on major alterations only. The data for each alteration is a shop ratio comprised of the percentage of the total work done in each shop. If data was not obtainable for a major alteration, the DMPPS, as a system default, spread the work for that alteration across the shops as if it were repair work for that availability.



### 2.3.2 Minor Alterations

Detailed shop ratio data were not collected for minor alterations. By NAVSEA direction minor alterations for each availability were grouped with the repair work for that availability. The repair work is spread over the shops by ratios developed from historical repair data.

### 2.4 METHODOLOGY

The methodology consisted of the following steps:

- Divide SHIPALTS (for ships other than carriers\*) into twenty two groups by ship type and class as follows:

<u>TYPE</u>	<u>CLASS</u>
CG	03, 10, 16, 26
CGN	09, 35, 36
DD	931, 933, 945, 948, 963
DDG	02, 31, 35, 37
FF	1037, 1040, 1052
FFG	01
SSBN	all classes combined into one group
SSN	all classes combined into one group

- Classify each SHIPALT by fiscal year of first accomplishment. Group these as already accomplished (FY76 or earlier), scheduled for first accomplishment by FY77, or not scheduled until FY78 or later.
- Identify potential sources of data.
- Collect data.

\* CV's and CVN's were considered under a different task. Alterations for auxiliary and amphibious ships were not included in the planning stage of the study; however, when data were being collected at the shipyards, any available information concerning auxiliary or amphibious ship alterations was also obtained.

- Obtain preliminary estimates from NAVSEA or other sources for SHIPALTS not accomplished.
- Convert data from real to functional shops
- Develop shop ratio for each SHIPALT
- Establish computerized SHIPALT file

## 2.5 DATA SOURCES

The two sources of data used to compile the data base were Planning and Engineering for Repairs and Alterations (PERA's) and Planning and Estimating (P&E) Divisions at the shipyards.

### 2.5.1 PERA Scopes

PERA's develop scopes prior to the detailed alterations estimate by shipyards. Scopes serve as a first line estimate and usually consider only the major shops which will be involved. Scopes are usually applicable to classes of ship rather than a single hull.

### 2.5.2 Shipyard Estimates

When a shipyard is planning an availability, each alteration is estimated down to the production shop level by the P&E Division, and this information is included in the Shipyard Job Order Status Report, Form FA-923A. This form was the primary source of data because estimates from it are more detailed than a PERA scope and because more shipyard estimates than scopes are available. At some shipyards a cross-index between SHIPALT number and job order number is required to identify the individual alteration.

The FA-923A also lists the expended man-hours in each shop. By NAVSEA direction only the estimated man-hour data were collected during data base development.

### 3. COLLECTION OF DATA

The shop ratio data for major alterations were collected from Planning and Engineering for Repairs and Alterations (PERA's) and from shipyard Planning and Estimating (P&E) Divisions. Before visits to the shipyards were made, the shipyard schedule and SAMIS were cross-checked to determine which ships were undergoing availabilities and what alterations were scheduled for each ship. This information was used as a guide during shipyard visits.

#### 3.1 PERA's

The three PERA's visited were:

- PERA (CRUDES) at Philadelphia Naval Shipyard
- PERA (SS) at Portsmouth Naval Shipyard
- PERA (ASC) at Norfolk Naval Shipyard

##### 3.1.1 PERA (CRUDES)

PERA (CRUDES) prepares scopes for alterations to cruiser and destroyer type ships. The responsible group within the PERA is Code 1830. The scopes obtained from PERA (CRUDES) are listed in Table 2. The ship type and class are listed in the top row and the SHIPALT number of the alterations is listed in the column below each ship type. A total of 80 scopes was obtained.

##### 3.1.2 PERA (SS)

PERA (SS) is responsible for the preparation of scopes for SSBN's and SSN's. PERA (SS) recently assumed responsibility for SSBN's, and because the work was previously done by private contractor, no extensive file of SSBN scopes containing shop estimates is available. The SHIPALT numbers of the scopes obtained from PERA (SS) are listed in Table 3 (see page 10).

##### 3.1.3 PERA (ASC)

PERA (ASC) is responsible for amphibious type ships, but because they do not prepare SHIPALT scopes to the shop level, no amphibious ship alteration scopes were available.



TABLE 2 - PERA (CRUDES) ESTIMATES

CG-3	CG-16	CG-26	CGN-9	CGN-35	CGN-36	DD-931
357	1034	192	217	128	23	286
445	1038	195	238			315
461	1057	321	288			351
475	1062	327	298			384
492	1113	331	322			
499	1147	332	384			
503	1152	374				
	1185					

DD-933	DD-945	DD-948	DD-963	DDG-2	DDG-31
1112	217	1096	9	296	20
1196	226	1162	15	395	80
	240			402	91
	273			473	117
	355			496	201
				574	

DDG-35	DDG-37	FF-1037	FF-1040	FF-1052	FFG-1
40	1009	103	304	294	237
44	1093	134	345	295	300
77	1122		395	378	338
137	1136			383	354
141	1145				410

### 3.2 SHIPYARDS

#### 3.2.1 East Coast Shipyards

All the East coast shipyards were visited in the data collection effort. SHIPALT estimates were collected at the shipyards from Code 239, the Planning Coordination Section, of the Planning and Estimating Division. The data were gathered from the Form FA-923A, Shipyard Job Order Status Report. Since only estimate data was gathered, and since estimates can change even after an availability has started, the data gathered should be the final estimate, which is available approximately 45 days after the start of an availability. Data contained on the FA-923A includes a listing of job order numbers and the hours estimated to be required for each production shop. Usually a cross reference between job order number and ship alteration number must be provided by P&E personnel. The list of ships on which data were collected is presented by shipyard in Table 4. Data obtained from each ship are listed in Section 4.

#### 3.2.2 West Coast Shipyards

Data collection trips were not made to the West coast shipyards, but copies of the FA-923A were requested from some of them. Table 5 lists the ships on which data were obtained.

TABLE 3 - PERA (SS) SCOPES

SSBN	SSN
1171	852
	1299
	1458
	1480
	1481
	1486
	1616
	1663
	1837

TABLE 4 - SHIPS AT EAST COAST SHIPYARDS

## NORFOLK, VA.

DD-941
DDG-3
DDG-4
DDG-17
DDG-23
SSN-675

## CHARLESTON, S.C.

DD-937
DD-938
DDG-45
FF-1049
FF-1072
FF-1075
FF-1079
FFG-6
SSN-653

## PHILADELPHIA, PA.

DD-933
DD-940
DDG-2
DDG-10
DDG-19
DDG-37
FF-1038
FF-1056
FF-1059
FF-1068
FF-1081
FFG-5

## PORTSMOUTH, N.H.

SSBN-620
SSBN-625
SSBN-628
SSBN-629
SSBN-630
SSBN-634
SSN-605
SSN-638
SSN-664
SSN-674
SSN-676



**TABLE 5 - SHIPS AT WEST COAST SHIPYARDS**

LONG BEACH, CA.

CG-29
CG-30
CG-31
CG-33
DD-945
DD-946
DDG-8
DDG-13
DDG-14
DDG-24
DDG-31
DDG-32
FF-1041
FF-1047
FF-1050
FF-1051
FF-1063
FF-1067
FF-1077
FFG-3

MARE ISLAND, CA.

SSBN-618
SSN-596

PUGET SOUND, WA.

SSN-672

#### 4. DATA BASE STATUS

##### 4.1 CLASSIFICATION BY FISCAL YEAR

The methodology called for each SHIPALT to be classified by fiscal year of first accomplishment. Table 6 presents the results of this classification. Only numbers of SHIPALTS, not SHIPALT numbers, are given. Alterations accomplished prior to FY76 or estimated in FY76 for later accomplishment were grouped in the FY76 category, which accounts for the large number of alterations in that category.

##### 4.2 FY76 COVERAGE

The alterations classified in the FY76 category were the primary objective of the data collection effort. Table 7 lists the number of alterations for which data were obtained and the percent coverage.

##### 4.3 SHIPALTS WITH DATA

SHIPALT numbers for which data were obtained are listed in Table 8 by ship type and class. The numbers of the auxiliary and amphibious SHIPALTS for which data were obtained are included.

##### 4.4 SHIPALTS WITHOUT DATA

Table 9 lists by fiscal year the SHIPALT numbers for which data were not obtained.

##### 4.5 SHIPALT NUMBER AND DATA SOURCE CROSS-INDEX

A cross-index between the SHIPALT numbers with data (as listed in Table 8) and the ships and PERA's used as data sources (as listed in Tables 2, 3, and 4) is given in Table 10 for each type and class ship.

TABLE 6 - SHIPALT CLASSIFICATION BY FISCAL YEAR

SHIP TYPE AND CLASS	NUMBER OF MAJOR SHIPALTS	FISCAL YEAR CATEGORY					
		76	77	78	79	80	81
CG-3	12	8	0	0	0	4	0
CG-10	5	1	1	3	0	0	0
CG-16	35	19	11	5	0	0	0
CG-26	34	23	5	4	0	2	0
CGN-9	20	6	0	14	0	0	0
CGN-35	8	1	0	1	0	0	6
CGN-36	4	1	0	0	0	3	0
DD-931	15	6	0	9	0	0	0
DD-933	12	10	0	1	1	0	0
DD-945	13	9	4	0	0	0	0
DD-948	6	2	0	1	3	0	0
DD-963	6	2	2	0	0	2	0
DDG-2	36	31	3	2	0	0	0
DDG-31	24	14	0	4	5	1	0
DDG-35	17	5	9	3	0	0	0
DDG-37	30	22	4	4	0	0	0
FF-1037	7	6	0	0	1	0	0
FF-1040	20	13	3	4	0	0	0
FF-1052	32	27	0	4	1	0	0
FFG-1	22	15	0	4	3	0	0
SSBN	66	44	2	16	3	1	0
SSN	50	43	0	6	1	0	0
TOTAL	474	308	44	85	18	13	6
% OF TOTAL		65.0	9.3	17.9	3.8	2.7	1.3

TABLE 7 - FY76 CATEGORY COVERAGE

SHIP TYPE AND CLASS	NUMBER IN FY 76 CATEGORY	NUMBER WITH DATA	NUMBER WITHOUT DATA	PERCENT WITH DATA
CG-3	8	7	1	87.5
CG-10	1	0	1	0
CG-16	19	8	11	42.1
CG-26	23	22	1	95.6
CGN-9	6	6	0	100
CGN-35	1	1	0	100
CGN-36	1	1	0	100
DD-931	6	4	2	66.7
DD-933	10	10	0	100
DD-945	9	9	0	100
DD-948	2	2	0	100
DD-963	2	2	0	100
DDG-2	31	31	0	100
DDG-31	14	14	0	100
DDG-35	5	5	0	100
DDG-37	22	22	0	100
FF-1037	6	3	3	50.0
FF-1040	13	12	1	92.3
FF-1052	27	27	0	100
FFG-1	15	15	0	100
SSBN	44	34	10	77.2
SSN	43	32	11	74.4
TOTAL	308	267	41	86.6



TABLE 8 - SHIPALT NUMBERS WITH DATA

CG 3	CG 10	CG 16	CG 26	CGN 9	CGN 35	CGN 36	DD 931	DD 933
357	NONE	1034	149	217	128	23	286	1041
445		1038	175	238			315	1051
461		1057	179	288			351	1056
475		1062	181	298			384	1065
492		1113	183	322				1079
499		1147	184	384				1085
503		1152	190					1112
		1185	192					1155
			195					1180
			206					1196
			218					
			242					
			271					
			283					
			296					
			321					
			323					
			327					
			331					
			332					
			374					
			377					

TABLE 8 (Continued)

DD-945	DD-948	DD-963	DDG-2	DDG-31	DDG-35	DDG-37	FF-1037	FF-1040
175	1096	9	296	20	40	332	103	154
176	1162	15	309	42	44	358	112	159
195			312	50	77	1005	134	180
217			327	55	137	1009		203
226			330	59	141	1011		232
240			333	63		1012		247
273			345	67		1014		261
296			355	80		1015		274
355			389	91		1021		304
			395	98		1024		345
			398	117		1030		392
			400	120		1031		395
			402	143		1035		
			412	201		1048		
			425			1055		
			433			1093		
			446			1104		
			453			1122		
			460			1123		
			463			1136		
			466			1145		
			467			1161		
			469					
			473					
			478					
			496					
			551					
			564					
			571					
			574					
			9051					

TABLE 8 (Continued)

FF-1052	FFG-1	SSBN	SSN	AOR	AS	LCC	LPH	LST
1	154	188	535	16	1119	605	278	31
5	158	199	560	33	1166	606	289	41
24	177	275	644	39	1203	620	320	53
42	178	383	722	40	1262	621	321	54
53	237	386	790	68	1264	630	341	135
77	258	405	827	70	1265	634	388	
78	264	409	852	71	1280	642	401	
80	275	419	1002	113	1288	643	436	
84	276	443	1042	147	1331	664	443	
87	300	444	1053			681	455	
96	338	493	1176			684	458	
101	345	507	1242			701	510	
114	354	890	1291			778	555	
123	390	921	1299					
172	410	924	1319					
182		927	1337					
200		931	1363					
206		975	1368					
235		1011	1457					
238		1022	1458					
244		1054	1468					
294		1135	1475					
295		1143	1480					
328		1151	1481					
348		1171	1482					
378		1173	1486					
383		1177	1561					
		1185	1616					
		1196	1663					
		1273	1756					
		1342	1834					
		1376	1837					
		1443						
		1459						

TABLE 9 - SHIPALT NUMBERS WITHOUT DATA

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
CG-3	9051				226	
					410	
					417	
					470	
CG-10	333	224	191			
			217			
			219			
CG-16	1016	181	1035			
	1030	1017	1040			
	1043	1039	1139			
	1049	1041	1151			
	1076	1077	1194			
	1085	1094				
	1115	1124				
	1120	1233				
	1126	1247				
	1145	1250				
	9050	1261				
CG-26	201	265	180		199	
		381	292		210	
		428	320			
		431	413			
		441				



TABLE 9 (Continued)

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
CGN-9			270			
			285			
			289			
			291			
			292			
			293			
			294			
			314			
			321			
			325			
			361			
			369			
			383			
			397			
CGN-35			277			110
						116
						184
						207
						272
						9050
CGN-36					12	
					15	
					35	

TABLE 9 (Continued)

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
DD 931	248		243			
	303		250			
			264			
			325			
			349			
			354			
			374			
			425			
			451			
DD 933			1156	1230		
DD 945		244				
		292				
		319				
		371				
DD 948			1081	1125		
				1151		
				1175		
DD 963		1			5	
		10			22	

TABLE 9 (Continued)

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
DDG-2		480	357			
		581	435			
		9050				
DDG-31			46	38	106	
			52	66		
			144	104		
			151	122		
				205		
DDG-35		28	9			
		33	37			
		35	131			
		56				
		83				
		87				
		155				
		182				
		195				
DDG-37		1069	1016			
		1124	1018			
		1223	1063			
		1229	1126			

TABLE 9 (Continued)

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
FF-1037	66			86		
	72					
	98					
FF-1040	97	266	234			
		278	293			
		298	377			
			399			
FF-1052			175	139		
			236			
			296			
			376			
FFG-1			239	374		
			266	396		
			283	397		
			400			



TABLE 9 (Continued)

SHIP TYPE AND CLASS	FISCAL YEAR CATEGORY					
	76	77	78	79	80	81
SSBN	255	1170	542	962	986	
	456	1345	572	1430		
	979		603	4999		
	1146		930			
	1205		1150			
	1272		1181			
	1370		1189			
	1375		1332			
	1436		1409			
	1487		1410			
			1420			
			1424			
			1467			
			1469			
			1476			
			1478			
SSN	579		740	858		
	705		1456			
	924		1483			
	1278		1833			
	1445		1919			
	1461		1937			
	1485					
	1499					
	1501					
	1581					
	1766					

TABLE 10 - SHIPALT NUMBER AND DATA SOURCE CROSS-INDEX

TABLE 10a - CG-3 CLASS

SHIPALT NUMBER	PERA (CRUDES)
357	X
445	X
461	X
475	X
492	X
499	X
503	X
TOTAL	7

TABLE 10b - CG-16 CLASS

SHIPALT NUMBER	PERA (CRUDES)
1034	X
1038	X
1057	X
1062	X
1113	X
1147	X
1152	X
1185	X
TOTAL	8

TABLE 10c - CG-26 CLASS

SHIPALT NUMBER	PERA (CRUDES)	CG 29 LBECH	CG 30 LBECH	CG 31 LBECH	CG 33 LBECH
149		X	X		X
175		X	X		
179		X	X	X	X
181		X	X	X	X
183		X	X	X	X
184		X	X	X	X
190		X	X	X	X
192	X				
195	X		X		
206			X	X	
218		X	X	X	
242			X		
271			X	X	X
283		X	X	X	X
296		X	X		
321			X		
323		X	X		
327	X				
331	X				
332	X				
374	X				
377		X	X		
TOTAL	6	12	17	9	8

TABLE 10 (Continued)

TABLE 10d - CGN-9 CLASS

SHIPALT NUMBER	PERA (CRUDES)
217	X
238	X
288	X
298	X
322	X
384	X
TOTAL	6

TABLE 10e - CGN-35 CLASS

SHIPALT NUMBER	PERA (CRUDES)
128	X
TOTAL	1

TABLE 10f - CGN-36 CLASS

SHIPALT NUMBER	PERA (CRUDES)
23	X
TOTAL	1

TABLE 10g - DD-931 CLASS

SHIPALT NUMBER	PERA (CRUDES)
286	X
315	X
351	X
384	X
TOTAL	4

TABLE 10 (Continued)

TABLE 10h - DD-933 CLASS

SHIPALT NUMBER	PERA (CRUDES)	DD 933 PHILA	DD 937 CHASN	DD 938 CHASN	DD 940 PHILA	DD 941 NORVA
1041		X	X		X	X
1051				X		
1056		X	X	X	X	
1065				X		
1079					X	
1085		X	X		X	X
1112	X					
1155		X			X	
1180			X	X		
1196	X					
TOTAL	2	4	4	4	5	2

TABLE 10i - DD-945 CLASS

SHIPALT NUMBER	PERA (CRUDES)	DD 945 LBECH	DD 946 LBECH
175		X	
176		X	X
195		X	X
217	X	X	X
226	X		X
240	X	X	
273	X	X	X
296			X
355	X		
TOTAL	5	6	6

TABLE 10j - DD-948 CLASS

SHIPALT NUMBER	PERA (CRUDES)
1096	X
1162	X
TOTAL	2

TABLE 10k - DD-963 CLASS

SHIPALT NUMBER	PERA (CRUDES)
9	X
15	X
TOTAL	2



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TABLE 10 (Continued)

TABLE 101 - DDG-2 CLASS

SHIPALT NUMBER	PRA (CRUDES)	DDG-2 PHILA	DDG-3 NORVA	DDG-4 NORVA	DDG-8 LBECH	DDG-10 PHILA	DDG-13 LBECH	DDG-14 LBECH	DDG-17 NORVA	DDG-19 PHILA	DDG-23 NORVA	DDG-24 LBECH
296	X											
309			X				X	X	X		X	X
312			X	X			X	X		X		X
327			X	X		X	X		X			
330			X	X			X	X		X		X
333		X		X	X							
345		X	X	X	X	X	X	X	X	X	X	X
355		X		X	X	X				X	X	
389		X	X	X	X	X	X	X	X		X	X
395	X											X
398			X			X		X				
400			X	X			X		X	X	X	X
402	X											
412		X	X	X	X	X		X	X	X	X	X
425			X	X			X					X
433				X	X	X	X	X				
446		X		X	X					X	X	
453			X				X	X	X	X	X	X
460									X		X	X
463				X				X				
466										X		
467		X	X	X	X	X	X	X	X	X	X	X
469									X			
473	X											
478		X	X	X	X	X		X	X		X	X
496	X											
551		X		X	X	X					X	
564		X		X	X	X				X	X	
571		X	X	X	X	X	X	X		X	X	X
574	X											
9051		X		X	X						X	
TOTAL	6	12	14	19	13	13	12	13	11	12	17	14

TABLE 10 (Continued)

TABLE 10m - DDG-31 CLASS

SHIPALT NUMBER	PERA (CRUDES)	DDG 31 LBECH	DDG 32 LBECH
20	X		X
42		X	X
50			X
55		X	X
59			X
63		X	X
67		X	X
80	X	X	X
91	X	X	X
98		X	X
117	X		X
120		X	X
143		X	
201	X		
TOTAL	5	9	12

TABLE 10n - DDG-35 CLASS

SHIPALT NUMBER	PERA (CRUDES)
40	X
44	X
77	X
137	X
141	X
TOTAL	5

TABLE 10o - DDG-37 CLASS

SHIPALT NUMBER	PERA (CRUDES)	DDG 37 PHILA	DDG 45 PHILA
332		X	
358		X	
1005		X	X
1009	X		
1011		X	X
1012		X	
1014		X	X
1015		X	X
1021		X	X
1024		X	X
1030		X	
1031			X
1035		X	
1048		X	X
1055		X	
1093	X		
1104		X	X
1122	X		
1123			X
1136	X		
1145	X		
1161			X
TOTAL	5	14	11

TABLE 10 (Continued)

TABLE 10p - FF-1037 CLASS

SHIPALT NUMBER	PERA (CRUDES)	FF-1038 PHILA
103	X	
112		X
134	X	
TOTAL	2	1

TABLE 10q - FF-1040 CLASS

SHIPALT NUMBER	PERA (CRUDES)	FF-1041 LBECH	FF-1047 LBECH	FF-1049 CHASN	FF-1050 LBECH	FF-1051 LBECH
154			X		X	
159		X		X	X	X
180		X		X	X	X
203		X	X		X	X
232				X		
247			X		X	X
261		X	X		X	X
274		X	X	X	X	X
304	X	X				X
345	X					
392		X			X	X
395	X					
TOTAL	3	7	5	4	8	8

TABLE 10 (Continued)

TABLE 10r - FF-1052 CLASS

SHIPALT NUMBER	PERA (CRUDES)	FF-1056 PHILA	FF-1059 PHILA	FF-1063 LBECH	FF-1067 LBECH	FF-1068 PHILA	FF-1072 CHASN	FF-1075 CHASN	FF-1077 LBECH	FF-1079 CHASN	FF-1081 PHILA
1		X				X					
5		X									
24		X	X	X	X	X	X	X	X	X	X
42						X				X	
53		X		X		X	X	X		X	
77		X				X					
78		X				X					
80		X			X	X			X		
84				X	X	X	X	X	X	X	
87						X					
96		X			X	X					
101			X	X		X	X	X	X	X	
114											X
123			X	X	X	X	X		X		
172		X									
182				X							
200				X			X	X			
206		X									
235				X						X	
238		X									
244						X				X	
294	X										
295	X										
328			X			X	X	X		X	X
348									X		
378	X										
383	X										
TOTAL	4	11	4	8	5	14	7	6	6	8	3



TABLE 10 (Continued)

TABLE 10s - FFG-1 CLASS

SHIPALT NUMBER	PERA (CRUDES)	FFG 3 LBECH	FFG 5 PHILA	FFG 6 CHASN
154		X		
158		X		X
177		X		X
178			X	X
237	X			
258		X		X
264		X		X
275		X	X	X
276		X	X	X
300	X	X		
338	X			
345		X		
354	X	X		
390		X	X	
410	X	X		
TOTAL	5	12	4	7

TABLE 10 (Continued)

TABLE 10t - SSBN TYPE

SHIPALT NUMBER	SSBN 618 MARE	SSBN 620 PTSMH	SSBN 625 PTSMH	SSBN 628 PTSMH	SSBN 629 PTSMH	SSBN 630 PTSMH	SSBN 634 PTSMH
188		X		X	X	X	X
199					X		X
275		X		X	X	X	X
383		X		X	X	X	X
386		X	X				
405			X				
409				X	X	X	X
419				X	X	X	X
443				X	X	X	X
444				X	X	X	X
493				X	X	X	X
507				X	X	X	X
890		X		X	X	X	X
921				X		X	X
924				X		X	
927		X		X	X	X	X
931	X	X		X	X	X	X
975	X	X		X	X	X	X
1011				X	X	X	X
1022				X	X	X	
1054	X			X	X	X	X
1135		X		X	X	X	X
1143	X	X		X	X	X	X
1151	X			X	X	X	X
1171*				X	X	X	X
1173				X	X	X	X
1177				X	X	X	X
1185				X	X	X	X
1196				X	X	X	X
1273				X	X	X	X
1342					X		
1376				X	X	X	X
1443					X		
1459				X	X	X	X
TOTAL	5	10	2	29	30	29	28

\*PLUS PERA(SS) SCOPE

TABLE 10 (Continued)

TABLE 10u - SSN TYPE

SHIPALT NUMBER	SSN 596 MARE	SSN 605 PTSMH	SSN 638 PTSMH	SSN 653 CHASN	SSN 664 PTSMH	SSN 672 PUGET	SSN 674 PTSMH	SSN 675 NORVA	SSN 676 PTSMH	PERA (SS)
535	X			X	X					
560	X									
644	X	X								
722		X								
790									X	
827		X								
852										X
1002			X							
1042		X								
1053					X		X	X	X	
1176					X		X	X	X	
1242		X								
1291		X						X		
1299				X		X		X	X	X
1319				X	X					
1337			X			X				
1363		X								
1368		X								
1457			X			X				
1458		X	X	X	X	X	X	X		X
1468			X							
1475						X	X			
1480										X
1481			X							X
1482			X	X		X				X
1486			X							X
1561		X	X	X						
1616			X	X	X		X	X		X
1663										X
1756		X								
1834		X								
1837			X							X
TOTAL	3	12	11	7	6	6	5	6	4	9

TABLE 10 (Continued)

TABLE 10v - AOR TYPE

SHIPALT NUMBER	AOR 1 LBECH	AOR 2 PHILA
16	X	X
33		X
39		X
40	X	X
68		X
70		X
71	X	
113	X	X
147		X

TABLE 10w - AS TYPE

SHIPALT NUMBER	AS 34 CHASN
1119	X
1166	X
1203	X
1262	X
1264	X
1265	X
1280	X
1288	X
1331	X

TABLE 10x - LCC TYPE

SHIPALT NUMBER	LCC 19 LBECH
605	X
606	X
620	X
621	X
630	X
634	X
642	X
643	X
664	X
681	X
684	X
701	X
778	X

TABLE 10y - LPH TYPE

SHIPALT NUMBER	LPH 7 PHILA	LPH 9 PHILA
278	X	X
289	X	X
320	X	
321	X	X
341	X	X
388	X	X
401	X	
436	X	X
443		X
455		X
458	X	X
510		X
555		X

TABLE 10z - LST TYPE

SHIPALT NUMBER	LST 1186 LBECH
31	X
41	X
53	X
54	X
135	X



## 5. CONVERSION TO FUNCTIONAL SHOPS

The ship alteration data collected from the shipyards are given in terms of man-hours in the production shops in each of the shipyards. The structure of the shops is similar among the shipyards, but only rarely are the shop functions identical. NAVSEA has developed a set of idealized, or functional, shops which can be used to compare the work of the different shipyards. This allows the real, or shipyard shop, data to be redistributed into common, or functional, shops. Comparisons can then be made on a shop to shop basis.

### 5.1 MANPOWER ALLOCATION

In order to convert real shop data to functional shop data, the manpower which is allocated to each functional shop task in each real shop must be known. NAVSEA 07, which has cognizance of this area, provided the employment figures for each of the shipyards as of January 1976. Functional shop numbers and titles are the same as the standard shop numbers and titles given in Table 1. Real shop versus functional shop manpower allocations for each shipyard are listed in Table 11.

### 5.2 CONVERSION FACTORS

The manpower allocations of Table 11 were used to develop a set of transformation equations for the conversion from real to functional shops. The factors used to develop the equations are given in Table 12. Each factor is the fraction of the real shop which contributes to each functional shop. For example, in Table 12a functional shop 06 is composed of real shop 06 plus .112 times real shop 31.

TABLE 11 - REAL SHOP VERSUS FUNCTIONAL SHOP MANPOWER ALLOCATION

TABLE 11a - PORTSMOUTH NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			OTHER
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	
05																				50
06	88																			
11		198		3																
13																				18
17			113																	
26					123															
31	28					201	8	12												80
33																				25
34																				30
38							46	209												
39																				
51										130										
56										314								7	4	
64											101									
67							18			4			75							
71															125	117				
72																111				
99																4		52		

TABLE 11 (Continued)

TABLE 11b - PHILADELPHIA NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																					
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER		
06	136																	3				7
11		173																				
13																						
16																						
17			179			4				2					1			1				
26					174																	
27						1																
31				1		304		17														
33																				30		
34																				23		
35																				20		
38																						
41				5				1	48	198	35											
51							2				110											
56									311	2												
64									319													
67									4	129					1							
71														184								
72															170							
76																218						
81																						
94																						
99																						

TABLE 11 (Continued)

TABLE 11c - NORFOLK NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05																				50
06	174																			
11		302	21															3		9
13																				
17			191		337	1														
26																				
27																			7	
31						309	14	6												
33																				50
34																				38
35																				69
38							100	311												
39																				23
41									154											
51							1		438									7		
56						10				593										
64										177										
67							44		21					234						
71														150						
72															404					
81																	1			
99																		73		



TABLE 11 (Continued)  
TABLE 11d - CHARLESTON NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			OTHER
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	
05																				60
06	120																			
11	139	6				1														
13																				15
17		127				2														
26					147															
31						131	5													44
33																				
34																				48
35																				40
38								70	262											
39																				100
41									42											
51									174											
56										363										
64											83								1	
67							35						150							
71											11			69						
72															219					
99															1			107		

TABLE 11 (Continued)

TABLE 11e - LONG BEACH NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
06	144																			
11		254																		
13																				
17			265																	3
26					254															
31						308														31
33																				21
34																		2		14
35																				
36								159												
38								305												
41				10					104								2			
51						20				441										
56											522									
64												194								8
67														224						
71															259					
72																431				81
99																				

TABLE 11 (Continued)  
TABLE 11f - MARE ISLAND NAVAL SHIPYARD

FUNCTIONAL SHOP																				
REAL SHOP	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05	61																			
06	185																			
11	283																			
13	2																			
17	126																			
23	13																			
26	170																			
31	332																			
33	48																			
34	58																			
35	40																			
36	63																			
38	8 477																			
39																				
41	20																			
42																				
51	9																			
56	330																			
64	347 40 91																			
67	188																			
71	127																			
72	286																			
81	1																			
99	104																			

TABLE 11 (Continued)

TABLE 11g - PUGET SOUND NAVAL SHIPYARD

FUNCTIONAL SHOP																				
REAL SHOP	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05	60																			
06	219	5																		
11	386																			
13	5																			
17	190																			
23	16																			
26	274																			
31	340																			
33	1																			
34	12																			
38	104 337																			
39	30 1																			
41	68																			
51	1																			
56	10 3																			
64	305 1																			
	403																			
	112																			
67	19																			
71	165																			
72	228 2																			
81	439																			
94	25																			
99	2																			
	134																			
	12																			



TABLE 11 (Continued)

TABLE 11h - PEARL HARBOR NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05	103	168																2		40
17			52	3	130	1														4
23						202		30												
26																				
27																				
31																				
33																				39
34																				42
35																				30
38								34	176											
39																				10
41									68											
51						1	2			207										
56											291									
64												70							6	
67														228						
71															82					
72																				
74																				
81																			17	

TABLE 12 - REAL SHOP TO FUNCTIONAL SHOP CONVERSION FACTORS

TABLE 12a - PORTSMOUTH NAVAL SHIPYARD

FUNCTIONAL SHOP																				
REAL SHOP	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05																				1.0
06	1.0																			
11		.985		.015																
13																				1.0
17			1.0																	
26					1.0															
31	.112					.807	.033	.048												1.0
33																				
34																				1.0
38							.181	.819												1.0
39																				
51										1.0										1.0
56											1.0							.062	.037	
64												.901								
67							.185			.041				.774		.516	.484			
71																				
72																1.0				
99																	.071		.929	

TABLE 12 (Continued)

TABLE 12b - PHILADELPHIA NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
06	1.0																	018		1.0
11		.982																		
13																				
16																				
17			.967			.021				.012					1.0					
26				.994														.006		
27						1.0														
31			.004			.944		.052												
33																				1.0
34																				1.0
35																				1.0
38																				
41				.044				.004 .170 .702	.956		.124									
51							.007			.986 .007										
56										1.0										
64										.029 .962					.009					
67							.167							.833						
71											.018				.982					
72											.010					.990				
76										1.0										
81																	1.0			
94											.143					.049		.951		857
99																				

TABLE 12 (Continued)

TABLE 12c - NORFOLK NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05	1.0																			1.0
06		.926		.064														.010		1.0
11																				
13																				
17			1.0																	
26					1.0															
27						1.0														
31						.919	.041	.020											.020	
33																				1.0
34																				1.0
35																				1.0
38							.244	.756												
39																				1.0
41									1.0											
51							.003		.982									.015		
56						.017				.983										
64										1.0										
67							.147		.071					.782						
71															1.0					
72																1.0				
81																	1.0			
99																		1.0		

TABLE 12 (Continued)  
TABLE 12d - CHARLESTON NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05																				1.0
06	1.0																			
11		.952		.041		.007														
13																				1.0
17			.984			.016														
26					1.0															
31						.963		.037												
33																				1.0
34																				1.0
35																				1.0
38							.211	.789												1.0
39																				
41									1.0											
51										1.0										
56											1.0									
64												.988							.012	
67						.190								.810						
71												.138			.862					
72																1.0				
99																.010		.990		



TABLE 12 (Continued)  
TABLE 12e - LONG BEACH NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
06	1.0																			
11		1.0																		
13																				
17			1.0																	1.0
26					1.0															
31						1.0														
33																				1.0
34														.125				.125		.875
35																				.875
36							1.0													
38								1.0												
41				.086					.896								.018			
51						.044			.956											
56										1.0										
64											.960									.040
67									.021	.010				.969						
71															1.0					
72																1.0				1.0
99																				

TABLE 12 (Continued)

TABLE 12f - MARE ISLAND NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																				
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER	
05	1.0																				1.0
06	.992																				1.0
11																					
13																					
17			1.0																		.072
23			.928																		
26				1.0																	
31					1.0																
33																				1.0	
34																				1.0	
35																				1.0	
36																					
38																					
39																				1.0	
41																					
42																				1.0	
51																					
56																					
64																				.072	
67																					
71																					
72																				1.0	
81																				1.0	
99																				1.0	

TABLE 12 (Continued)

TABLE 12g - PUGET SOUND NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05	1.0																			1.0
06		1.0																		
11			1.0																	
13																				1.0
17			1.0																	
23				.941		.059														
26					1.0															
31						.963				.004								.033		
33																				1.0
34																				1.0
38								.220 .713		.063 .004										
39																				1.0
41				.015		.015			.970					.042						
51						.030 .009				.915 .004										
56										1.0										
64											1.0									
67						.005 .159				.086			.750							
71											.005				.987 .008					
72											.003				.994					.003
81																	1.0			
94																.015		.985	1.0	
99																				

TABLE 12 (Continued)  
TABLE 12h - PEARL HARBOR NAVAL SHIPYARD

REAL SHOP	FUNCTIONAL SHOP																			
	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
05																				1.0
06	.980																	.020		
11		1.0																		
13																				1.0
17			1.0																	
23				1.0																
26					1.0															
27						1.0														
31						.870		.130												
33																				1.0
34																				1.0
35																				1.0
38							.162	.838												1.0
39																				
41									1.0											
51						.006	.009		.985											
56										1.0										
64							.176			.921									.079	
67											.824									
71											1.0									
72																1.0				
74																1.0				
81																	1.0			

## 6. SHOP RATIOS

Shop ratios for the available data on major ship alterations are listed in Table 13. When more than one estimate was available, the ratios were averaged to get the overall ratio.



TABLE 13 - MAJOR SHIPALT SHOP RATIOS

TABLE 13a - CG 3 CLASS

SHIPALT NUMBER	SHOP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
357	.0030	.1107	.0000	.0000	.0714	.0200	.0000	.0523	.0000	.5080	.0000	.0201	.0000	.1851	.0181	.0342	.0000	.0000	.0000	.0000
465	.0070	.1451	.1692	.0000	.1269	.0169	.0000	.0794	.0000	.0729	.2323	.0514	.0000	.0000	.0312	.0748	.0000	.0000	.0000	.0000
461	.0070	.1404	.0000	.0000	.0730	.0070	.0000	.0730	.0000	.1404	.0000	.0393	.0000	.3539	.0393	.1404	.0000	.0000	.0000	.0000
475	.0070	.2754	.0135	.0000	.1242	.0135	.0000	.0339	.0000	.1558	.0497	.0903	.0000	.0090	.1151	.1038	.0800	.0000	.0158	.0000
492	.0070	.1207	.0626	.0000	.1777	.0262	.0000	.0945	.0729	.0000	.2938	.0000	.0000	.0000	.0524	.0991	.0000	.0000	.0000	.0000
499	.0070	.0243	.0093	.0000	.1925	.0467	.0000	.1869	.0374	.0000	.3364	.0299	.0000	.0000	.0598	.0636	.0000	.0000	.0131	.0000
503	.0070	.0918	.0110	.0000	.0786	.0000	.0000	.0472	.0000	.4591	.0535	.0252	.0000	.1777	.0173	.0487	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 13b - CG 16 CLASS

SHIPALY NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
1034	.0000	.0417	.0278	.0000	.0347	.0000	.0000	.0764	.0000	.1181	.1389	.0111	.0000	.4306	.0167	.1042	.0000	.0000	.0000	.0000
1035	.0000	.0759	.0525	.0000	.0547	.0010	.0000	.0463	.0000	.3239	.0212	.0423	.0000	.2706	.0263	.0642	.0000	.0000	.0234	.0000
1057	.0000	.0976	.0195	.0000	.0759	.0000	.0000	.0325	.0000	.4360	.0629	.0217	.0000	.1931	.0260	.0347	.0000	.0000	.0000	.0000
1062	.0000	.1039	.0000	.0000	.0717	.0000	.0000	.0567	.0000	.4818	.0000	.0225	.0000	.2077	.0193	.0364	.0000	.0000	.0000	.0000
1113	.0000	.0269	.0269	.0000	.0269	.0000	.0000	.0404	.0000	.0000	.8906	.0307	.0000	.0000	.0269	.0607	.0300	.0000	.0000	.0000
1147	.0000	.1203	.0301	.0000	.0851	.0104	.0000	.0643	.0000	.2334	.0288	.0695	.0000	.2002	.0062	.0633	.0000	.0000	.0073	.0000
1152	.0000	.1366	.0390	.0000	.0029	.0000	.0000	.0505	.0000	.2732	.0488	.0400	.0000	.2244	.0439	.0439	.0000	.0000	.0000	.0000
1185	.0000	.1024	.0000	.0000	.0632	.0000	.0000	.1471	.0000	.1569	.0523	.0392	.0000	.2076	.0460	.1046	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 13c - CG 26 CLASS

SHIPALT NUMBER	SHOP 86	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 36	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
169	.0026	.2356	.0120	.0002	.1625	.0245	.0497	.0021	.0026	.0777	.0907	.1119	.0000	.0296	.0256	.0578	.0001	.0152	.0047	.0949
175	.0000	.1228	.0346	.0010	.1537	.0170	.0000	.0439	.0100	.0298	.3957	.0437	.0000	.0000	.0467	.0616	.0002	.0033	.0010	.0340
179	.0309	.0938	.1142	.0002	.0883	.0174	.0011	.0032	.0022	.1661	.1405	.0438	.0000	.0700	.0300	.0785	.0000	.0001	.0018	.1107
181	.0123	.0489	.0787	.0000	.0355	.0251	.1695	.0000	.0000	.4696	.0135	.0175	.0000	.0561	.0161	.0265	.0000	.0045	.0007	.0952
183	.0000	.0788	.0525	.0000	.0526	.0228	.0799	.0007	.0000	.4393	.0311	.0331	.0000	.0386	.0271	.0393	.0000	.0033	.0014	.0994
184	.0000	.0687	.0177	.0000	.0438	.0202	.1037	.0000	.0000	.4332	.0000	.0304	.0000	.0009	.0278	.0426	.0000	.0005	.0012	.2020
190	.0000	.0620	.0772	.0000	.0490	.0188	.4136	.0000	.0000	.1305	.0447	.0165	.0000	.0016	.0128	.0407	.0000	.0075	.0007	.1244
192	.0000	.0689	.0000	.0000	.0721	.0000	.0000	.0525	.0000	.2590	.2295	.0295	.0000	.1934	.0262	.0689	.0000	.0000	.0000	.0000
195	.0000	.1077	.0154	.0000	.0615	.0000	.0000	.0923	.0000	.1846	.0692	.0538	.0000	.2308	.0385	.1308	.0000	.0000	.0154	.0000
206	.0000	.0984	.0214	.0000	.0536	.0197	.0000	.0000	.0000	.4296	.0033	.0662	.0000	.1192	.0437	.0344	.0000	.0152	.0028	.1089
218	.0000	.0747	.1779	.0042	.1561	.0302	.0000	.0686	.0430	.0566	.1694	.0440	.0000	.0007	.0386	.0820	.0009	.0045	.0018	.0629
242	.0000	.0235	.0000	.0018	.1487	.1600	.0000	.1315	.0189	.0079	.4802	.0135	.0000	.0000	.0117	.0516	.0004	.0000	.0006	.0317
271	.0000	.0035	.0252	.0010	.1568	.0217	.0000	.0726	.0097	.0000	.6312	.0000	.0000	.0000	.0000	.0023	.0002	.0000	.0000	.0757
283	.0000	.1334	.0009	.0000	.0912	.0142	.0000	.0000	.0000	.2956	.0490	.0996	.0000	.0798	.0384	.1358	.0000	.0272	.0042	.0397
296	.0000	.1491	.0000	.0005	.1453	.1682	.0000	.1890	.0051	.1271	.0665	.0392	.0000	.0000	.0228	.0722	.0001	.0000	.0016	.0133
321	.0000	.1102	.0913	.0003	.1074	.0173	.0000	.0655	.0031	.0316	.4802	.0549	.0000	.0000	.0344	.0548	.0001	.0000	.0185	.0178
323	.0000	.0656	.0551	.0019	.0959	.0219	.0000	.0032	.0204	.1215	.4578	.0382	.0000	.0000	.0285	.0442	.0004	.0000	.0016	.0528
327	.0000	.2021	.0888	.0000	.1356	.0133	.0000	.1037	.0000	.1888	.0000	.0691	.0000	.1489	.0479	.0824	.0000	.0000	.0000	.0000
331	.0000	.2071	.0685	.0000	.1523	.0382	.0000	.0461	.0000	.1297	.1019	.0356	.0000	.0878	.0258	.1466	.0000	.0000	.0000	.0000
332	.0000	.1866	.0350	.0000	.1224	.0000	.0000	.0496	.0000	.2566	.0350	.0204	.0000	.2303	.0292	.0350	.0000	.0000	.0000	.0000
374	.0000	.0964	.0000	.0000	.0723	.0000	.0000	.0723	.0000	.2410	.0682	.0361	.0000	.3012	.0361	.0843	.0000	.0000	.0000	.0000
377	.0000	.1393	.0533	.0000	.1126	.0122	.0042	.0000	.0000	.2256	.0488	.1146	.0000	.0470	.0423	.0363	.0000	.0000	.0048	.1576

TABLE 13 (Continued)

TABLE 13d - CGN 9 CLASS

SHIPALT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
217	.0000	.0614	.0130	.0000	.0419	.0070	.0000	.0296	.0000	.4661	.0260	.0209	.0000	.2657	.0100	.0347	.0000	.0000	.0000	.0000
238	.0070	.6147	.0000	.0000	.2661	.0642	.0000	.0000	.0000	.0000	.0000	.0092	.0000	.0000	.0367	.0092	.0000	.0000	.0000	.0000
288	.0000	.1126	.0143	.0000	.0010	.0000	.0000	.3314	.0000	.3928	.0473	.0439	.0000	.2038	.0257	.0473	.0000	.0000	.0000	.0000
298	.0000	.1025	.0000	.0000	.0621	.0070	.0000	.0435	.0000	.3820	.0000	.0217	.0000	.3043	.0166	.0652	.0000	.0000	.0000	.0000
322	.0070	.6129	.0000	.0000	.1505	.0000	.0000	.0430	.0000	.0968	.0645	.0000	.0000	.0000	.0323	.0000	.0000	.0000	.0000	.0000
384	.0000	.1330	.0467	.0000	.1666	.0202	.0000	.1021	.0606	.0000	.3135	.0107	.0000	.0000	.0499	.0926	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 13e - CGN 35 CLASS

SHIPALY NUMBER	06	11	17	23	26	31	35	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
128	.0000	.0041	.0187	.0000	.0654	.0030	.0300	.1026	.0000	.1495	.0841	.0467	.0000	.2430	.0374	.1495	.0000	.0000	.0187	.0000



TABLE 13 (Continued)

TABLE 13f - CGN 36 CLASS

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 39	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
28	.0000	.0714	.0729	.0000	.0635	.0070	.0000	.0794	.0234	.2619	.0635	.0397	.0000	.2143	.0556	.1111	.0000	.0000	.0079	.0000

TABLE 13 (Continued)

TABLE 13g - DD 931 CLASS

SMTPLT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
286	.0000	.1630	.0262	.0000	.1449	.0201	.0000	.0805	.0423	.1107	.2676	.0282	.0000	.0000	.0201	.0966	.0000	.0000	.0000	.0000
315	.0000	.0915	.1508	.0000	.1077	.0000	.0000	.0055	.0000	.0994	.1229	.0677	.0000	.0069	.0773	.0732	.0000	.0000	.0069	.0000
351	.0070	.7234	.5716	.0000	.1088	.0000	.0000	.0689	.0000	.0386	.0758	.0069	.0000	.0000	.0000	.1061	.0000	.0000	.0000	.0000
384	.0000	.0000	.0017	.0275	.1657	.1093	.0009	.0004	.4702	.0000	.0905	.0098	.0000	.0000	.0085	.0175	.0058	.0000	.0009	.0914

TABLE 13 (Continued)

TABLE 13h - DD 933 CLASS

SMTPALY NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
1051	.0000	.1242	.0283	.7049	.1358	.7198	.0066	.0264	.0405	.0091	.4287	.0142	.0000	.0000	.0192	.0424	.0000	.0055	.0001	.0951
1056	.0000	.7303	.9962	.0017	.1275	.0154	.0062	.0243	.0152	.3527	.3958	.0266	.0000	.0020	.0388	.0369	.0000	.0059	.0002	.0666
1065	.0001	.9746	.0129	.0932	.0192	.0151	.0938	.2631	.0000	.1713	.0540	.0212	.0000	.1014	.0063	.0599	.0000	.0035	.0002	.0681
1079	.0000	.0000	.0000	.0119	.1174	.0175	.0214	.0892	.2575	.0000	.2984	.0002	.0000	.0000	.0000	.0220	.0000	.0102	.0000	.0763
1085	.0000	.9996	.0201	.0012	.1040	.0391	.0147	.3692	.0279	.1570	.2771	.0254	.0000	.0000	.0204	.0507	.0001	.0069	.0001	.0013
1112	.0000	.0782	.4017	.0000	.1220	.0000	.0000	.7498	.0000	.1007	.0723	.0474	.0000	.0036	.0699	.0545	.0000	.0000	.0000	.0000
1155	.0000	.1259	.0924	.0000	.1190	.0022	.0431	.0220	.0000	.1757	.0254	.0225	.0000	.1824	.0455	.0299	.0000	.0031	.0000	.1109
1180	.0000	.0030	.0000	.0001	.1230	.0799	.0073	.0302	.4811	.0000	.0973	.0210	.0000	.0000	.0078	.0304	.0000	.0013	.0002	.1095
1196	.0000	.0970	.0075	.0000	.1193	.0783	.0000	.1652	.0870	.1106	.1714	.0398	.0000	.0000	.0137	.1110	.0000	.0000	.0007	.0000

TABLE 13 (Continued)

TABLE 13i - DD 945 CLASS

SHIPALT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
175	.0070	.1499	.0177	.0047	.1502	.0247	.0000	.0323	.0487	.0247	.3191	.0274	.0000	.0000	.0275	.0546	.0010	.0138	.0011	.1027
176	.0000	.0000	.0000	.0022	.1783	.0030	.0000	.0421	.0232	.0000	.6062	.0249	.0000	.0000	.0000	.0097	.0005	.0000	.0010	.1118
195	.0000	.1197	.0431	.0007	.1350	.0140	.0000	.0440	.0073	.0501	.3978	.0444	.0000	.0000	.0451	.0489	.0001	.0024	.0019	.0455
217	.0070	.0091	.0288	.0053	.1084	.0320	.0000	.1444	.0562	.0952	.3231	.0613	.0000	.0000	.0443	.0422	.0012	.0000	.0026	.1460
226	.0000	.0242	.0000	.0016	.1283	.1376	.0000	.1192	.0163	.0058	.3424	.0155	.0000	.0000	.0101	.0444	.0003	.0000	.0006	.1535
240	.0000	.0904	.0931	.0000	.1219	.0034	.0000	.0129	.0000	.0990	.1765	.0219	.0000	.0000	.0356	.0396	.0000	.0007	.0009	.0023
273	.0070	.1657	.3448	.0000	.1253	.0031	.0000	.0000	.0000	.0672	.1441	.0261	.0000	.0070	.0283	.0219	.0000	.0000	.0010	.0745
296	.0000	.2003	.1148	.0000	.1335	.0079	.0000	.0000	.0000	.1730	.0052	.0785	.0000	.0625	.0584	.0610	.0000	.0000	.0033	.1036
355	.0000	.0744	.3140	.0000	.0702	.0000	.0000	.0331	.0000	.1281	.1653	.0537	.0000	.0000	.0785	.3661	.0000	.0000	.0165	.0000

TABLE 13 (Continued)

TABLE 13j - DD 948 CLASS

SHIPALY NUMBER	96	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
1096	.0000	.0782	.4017	.0000	.1220	.0000	.0000	.0498	.0000	.1007	.0723	.0474	.0000	.0036	.0699	.0545	.0000	.0000	.0000	.0000
1162	.0000	.0000	.0017	.0275	.1657	.1093	.0009	.0004	.4702	.0000	.0905	.0098	.0000	.0000	.0065	.0175	.0050	.0000	.0009	.0914



TABLE 13 (Continued)

TABLE 13k - DD 963 CLASS

SHIPMENT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
9	.0000	.1139	.0628	.0000	.0833	.0000	.0000	.0351	.0000	.3583	.0667	.0361	.0000	.2361	.0278	.0389	.0000	.0000	.0000	.0000
15	.0000	.4907	.0000	.0000	.1981	.3230	.0000	.0000	.0000	.2053	.0000	.0024	.0000	.0000	.0386	.0459	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 131 - DDG 2 CLASS

SHIPALY NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 41	SHOP 46	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
286	.0000	.1115	.0564	.0000	.0000	.0000	.0000	.0317	.0000	.3763	.0174	.0310	.0000	.1774	.0359	.0603	.0000	.0000	.0000	.0000
309	.0000	.0953	.4172	.0037	.0471	.0135	.0103	.0001	.0003	.4729	.0040	.0339	.0000	.1290	.0201	.0474	.0000	.0047	.0011	.1013
312	.0000	.1117	.1219	.0047	.0865	.0160	.0139	.0034	.0026	.2795	.0631	.0561	.0000	.0961	.0279	.0367	.0000	.0034	.0011	.0754
327	.0000	.1175	.1455	.0000	.1109	.0212	.0064	.0304	.0524	.0163	.4274	.0196	.0000	.0000	.0212	.0450	.0003	.0020	.0005	.0749
330	.0000	.1435	.0151	.0011	.0277	.0329	.2692	.1541	.0007	.1200	.0323	.0277	.0300	.1535	.0104	.0491	.0000	.0004	.0006	.0616
333	.0000	.1000	.2230	.0072	.1740	.0565	.0065	.0177	.0042	.0434	.0396	.0530	.0000	.0000	.0312	.0967	.0000	.0043	.0000	.1419
345	.0000	.1058	.0169	.0024	.0593	.0064	.0064	.0075	.0003	.3162	.0569	.1310	.0000	.0000	.0531	.1517	.0000	.0214	.0027	.0613
355	.0000	.1100	.1193	.0031	.1342	.0214	.0005	.0397	.0096	.0391	.3198	.0512	.0000	.0000	.0300	.0559	.0000	.0033	.0005	.0465
369	.0000	.1109	.0233	.0059	.1114	.0433	.0143	.0720	.0452	.0943	.2629	.0296	.0000	.0000	.0230	.0501	.0004	.0056	.0010	.0000
395	.0000	.0244	.0000	.0000	.1573	.1573	.0000	.1756	.0275	.0000	.4580	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
398	.0000	.0345	.1319	.0023	.0902	.0092	.0255	.0129	.0000	.3690	.0305	.0273	.0000	.0019	.0294	.0633	.0000	.0037	.0003	.0000
400	.0000	.0390	.0367	.0020	.1230	.0447	.0270	.1033	.0108	.1078	.3332	.0245	.0000	.0011	.0130	.0671	.0001	.0044	.0010	.0000
422	.0000	.0822	.0068	.0000	.0548	.0000	.0000	.0342	.0000	.2123	.0000	.0060	.0000	.5616	.0060	.0342	.0000	.0000	.0000	.0000
412	.0000	.0929	.0056	.0029	.1164	.0160	.0011	.0059	.0009	.0000	.5320	.0493	.0000	.0000	.0369	.0339	.0000	.0034	.0006	.1034
425	.0000	.2305	.0139	.0009	.1304	.0254	.0376	.0000	.0092	.2570	.0005	.1196	.0000	.0438	.0232	.0346	.0002	.0000	.0050	.0000
433	.0000	.0339	.0109	.0009	.0467	.0294	.0512	.0017	.0000	.5432	.0015	.0390	.0000	.0395	.0159	.0110	.0000	.0015	.0012	.1117
445	.0000	.0494	.1950	.0013	.1306	.0070	.0044	.0175	.0000	.0482	.1418	.0457	.0000	.0000	.0450	.0511	.0000	.0048	.0003	.0169
453	.0000	.0904	.1231	.0024	.1002	.0224	.0022	.0112	.0104	.0723	.3419	.0420	.0000	.0002	.0299	.0403	.0001	.0046	.0011	.1043
460	.0000	.0930	.0305	.0135	.0426	.0222	.0403	.0079	.0000	.5309	.0005	.0151	.0000	.0531	.0130	.0139	.0000	.0044	.0002	.1294
463	.0000	.0000	.0017	.0275	.1657	.1093	.0009	.0004	.4702	.0000	.0905	.0094	.0000	.0000	.0005	.0175	.0050	.0000	.0009	.0016
466	.0000	.1263	.0354	.0020	.1250	.0217	.0117	.0405	.0590	.0254	.4621	.0111	.0000	.0000	.0263	.0274	.0000	.0153	.0000	.0000
467	.0000	.1113	.3462	.0018	.1250	.0112	.0037	.0160	.0047	.0966	.1242	.0433	.0000	.0042	.0247	.0362	.0000	.0025	.0006	.0479

TABLE 13 (Continued)

TABLE 131 (Continued)

SHIPALY NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
459	.0000	.1473	.0712	.0099	.1649	.0293	.0010	.0005	.0449	.0000	.3900	.0029	.0000	.0000	.0281	.0828	.0000	.0177	.0005	.0531
473	.0000	.1721	.0059	.0000	.1039	.0000	.0000	.0514	.0000	.1086	.0000	.0178	.0000	.2700	.0178	.0504	.0000	.0000	.0000	.0000
478	.0000	.1644	.0225	.0014	.0529	.0140	.0106	.0013	.0000	.4673	.0547	.0337	.0000	.0647	.0190	.0214	.0000	.0046	.0006	.1669
496	.0000	.2691	.1588	.0000	.3118	.0000	.0000	.0000	.0000	.0647	.0547	.0735	.0000	.0000	.0250	.0324	.0000	.0000	.0000	.0000
551	.0000	.0199	.4030	.0027	.0902	.0054	.0010	.0036	.0379	.0449	.1945	.0128	.0300	.0000	.0598	.0457	.0001	.0013	.0001	.0570
564	.0000	.0193	.3782	.0008	.0968	.0078	.0048	.0171	.0000	.0954	.1637	.0309	.0000	.0005	.0600	.0444	.0000	.0011	.0003	.0589
571	.0000	.0885	.0715	.0027	.0778	.0079	.0229	.0120	.0000	.1918	.0907	.1231	.0000	.0813	.0784	.0632	.0004	.0036	.0036	.0806
576	.0000	.3295	.1044	.0000	.1485	.0000	.0000	.0000	.0000	.0325	.0000	.1624	.0000	.0000	.0603	.1485	.0000	.0000	.0139	.0000
9051	.0000	.2844	.0317	.0114	.1226	.0073	.0045	.0044	.0037	.1664	.0143	.1300	.0000	.0121	.0457	.1056	.0000	.0043	.0016	.0800

TABLE 13 (Continued)

TABLE 13m - DDG 31 CLASS

SHIPALT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
20	.0000	.0662	.0149	.0000	.0488	.0224	.0000	.0021	.0000	.4214	.0338	.0592	.0000	.1795	.0160	.0138	.0000	.0000	.0025	.1193
42	.0000	.1264	.0000	.0000	.0664	.0138	.0000	.0000	.0000	.2998	.0760	.0494	.0000	.0000	.0097	.2829	.0000	.0000	.0021	.0736
50	.0000	.1403	.0581	.0011	.1433	.0195	.0000	.0398	.0114	.0425	.3335	.0491	.0000	.0000	.0548	.0685	.0002	.0000	.0020	.0658
55	.0000	.0639	.0462	.0002	.0762	.0249	.0004	.0050	.0017	.3027	.1270	.0273	.0000	.0772	.0323	.0625	.0001	.0000	.0011	.1295
59	.0000	.1379	.0471	.0000	.0764	.0174	.1263	.0000	.0000	.3415	.0364	.0459	.0000	.0000	.0220	.0421	.0000	.0000	.0019	.1651
63	.0000	.0701	.0056	.0000	.0528	.0270	.4664	.0000	.0000	.1548	.0230	.0201	.0000	.0010	.0008	.0499	.0000	.0000	.0011	.1116
67	.0000	.1275	.0116	.0000	.0895	.0197	.0000	.0000	.0000	.3346	.0712	.0391	.0000	.0631	.0434	.0348	.0000	.0000	.0017	.1689
90	.0000	.1212	.0492	.0038	.1263	.0250	.0000	.0501	.0401	.0717	.2875	.0550	.0000	.0000	.0381	.0643	.0000	.0000	.0023	.0546
91	.0000	.0250	.0179	.0000	.0607	.1393	.0700	.2750	.0464	.0000	.3786	.0000	.0000	.0000	.0179	.0357	.0000	.0000	.0036	.0000
98	.0000	.1555	.0297	.0041	.1534	.0162	.0000	.0366	.0430	.0038	.4036	.0282	.0000	.0000	.0376	.0190	.0009	.0005	.0012	.0669
117	.0000	.0598	.2799	.0002	.0984	.0176	.0000	.0008	.0025	.2018	.0802	.0663	.0000	.0000	.0434	.0666	.0000	.0000	.0020	.0617
120	.0000	.1631	.0651	.0001	.1113	.0073	.0072	.0072	.0010	.0449	.3365	.0533	.0000	.0062	.0174	.0866	.0000	.0000	.0022	.1026
143	.0000	.0000	.0000	.0392	.1559	.2049	.0000	.0016	.4079	.0000	.0883	.0093	.0000	.0000	.0113	.0138	.0002	.0000	.0004	.0591
201	.0000	.0679	.4469	.0000	.1238	.0070	.0000	.0460	.0000	.0887	.0745	.0241	.0000	.0033	.0679	.0570	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 13n - DDG 35 CLASS

SHIPALY NUMBER	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
40	.0010	.0486	.0243	.0000	.0411	.0010	.0000	.0710	.0000	.1290	.1178	.0224	.0000	.4449	.0131	.0879	.0000	.0000	.0000	.0000
46	.0010	.1454	.0214	.0000	.0731	.0009	.1035	.0963	.0178	.1829	.2364	.0125	.0000	.0000	.0232	.0785	.0000	.0000	.0000	.0000
77	.0000	.0294	.0210	.0000	.0840	.1513	.0000	.2143	.0420	.0000	.3950	.0000	.0000	.0000	.0210	.0378	.0000	.0000	.0042	.0000
137	.0000	.1753	.0326	.0000	.1203	.0000	.0000	.0653	.0000	.2543	.0241	.0172	.0000	.2320	.0172	.0619	.0000	.0000	.0000	.0000
141	.0000	.1421	.0428	.0000	.0873	.0034	.0000	.0342	.0000	.2637	.0479	.0497	.0000	.2329	.0445	.0514	.0000	.0000	.0000	.0000



TABLE 13 (Continued)

TABLE 13a - DDG 37 CLASS

SHIPALT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER		
332	.0000	.0000	.0000	.0000	.1114	.0062	.0583	.2410	.0000	.0000	.4160	.0011	.0000	.0000	.0000	.1076	.0000	.0007	.0000	.0577		
358	.0000	.1340	.2447	.0001	.1071	.0055	.0108	.0378	.0023	.2300	.0473	.0485	.0000	.0000	.0000	.0166	.1009	.0000	.0031	.0000	.0109	
1005	.0000	.1036	.0794	.0027	.1121	.0110	.0191	.0066	.0070	.0306	.4772	.0314	.0000	.0000	.0000	.0416	.0233	.0000	.0103	.0002	.0337	
1009	.0000	.1885	.0612	.0000	.1416	.0084	.0000	.0483	.0000	.1589	.1026	.0360	.0000	.0000	.0000	.0212	.1436	.0000	.0000	.0000	.0000	
1011	.0000	.0538	.0149	.0000	.0321	.0036	.0696	.0473	.0000	.1606	.1576	.0156	.0000	.0000	.0000	.0167	.0431	.0000	.0012	.0000	.1025	
1012	.0000	.0637	.0103	.0000	.0448	.0038	.0638	.0614	.0000	.4016	.0154	.0527	.0000	.0000	.0000	.0171	.0206	.0000	.0014	.0000	.0136	
1014	.0000	.0366	.0305	.0016	.0234	.0022	.0089	.0203	.0000	.0000	.0375	.0229	.0000	.0000	.0000	.0045	.0344	.0000	.0016	.0000	.02510	
1015	.0000	.0634	.1132	.0000	.0513	.0070	.0556	.0060	.0000	.2985	.1055	.0065	.0000	.0000	.0000	.0095	.0066	.0000	.0054	.0000	.0117	
1021	.0000	.0479	.0766	.0012	.0368	.0238	.0000	.1971	.0000	.1405	.0844	.0216	.0000	.0000	.0000	.0093	.0478	.0000	.0049	.0000	.0095	
1024	.0000	.0058	.0395	.0024	.0682	.0057	.0524	.0272	.0000	.1195	.2430	.0321	.0000	.0000	.0000	.0158	.0313	.0000	.0052	.0000	.0619	
1030	.0000	.0514	.0000	.0221	.1768	.1326	.0005	.0094	.4682	.0000	.0696	.0104	.0000	.0000	.0000	.0076	.0412	.0000	.0072	.0000	.0230	
1031	.0000	.1532	.0463	.0066	.0495	.0059	.0613	.0683	.0000	.0817	.0837	.0418	.0000	.0000	.0000	.0246	.0402	.0000	.0026	.0005	.1090	
1035	.0000	.0405	.0291	.0000	.0315	.0021	.0624	.0190	.0000	.3281	.0099	.1276	.0000	.0000	.0000	.0063	.0287	.0000	.0069	.0000	.0345	
1048	.0000	.1376	.0369	.0030	.1231	.0434	.0139	.0597	.0622	.0082	.1967	.0173	.0000	.0000	.0000	.0115	.0394	.0000	.0115	.0000	.0354	
1055	.0000	.1789	.0281	.0042	.1534	.0245	.0192	.0768	.0000	.1297	.1618	.0224	.0000	.0000	.0000	.0163	.0804	.0000	.0037	.0000	.0577	
1093	.0000	.1165	.0000	.0000	.0663	.0030	.0000	.1308	.0000	.1864	.0466	.0412	.0000	.0000	.0000	.0520	.1022	.0000	.0000	.0000	.0000	
1104	.0000	.2095	.0146	.0000	.0661	.0005	.0110	.0379	.0000	.2467	.0317	.0084	.0000	.0000	.0000	.0162	.1501	.0000	.1371	.0000	.0696	
1122	.0000	.1389	.0370	.0000	.1111	.0000	.0000	.0741	.0000	.1204	.0833	.0000	.0000	.0000	.0000	.0463	.0370	.0000	.0000	.0000	.0000	
1123	.0006	.1570	.0563	.0066	.1260	.0182	.0369	.0359	.0000	.0328	.0699	.1372	.0000	.0000	.0000	.0169	.0301	.0856	.0000	.0033	.0016	.0892
1136	.0000	.1787	.0317	.0000	.1335	.0030	.0000	.0543	.0000	.2051	.0271	.0158	.0000	.0000	.0000	.0226	.0385	.0000	.0000	.0000	.0000	
1145	.0000	.0000	.0000	.0000	.1060	.0000	.0000	.0000	.0000	.0000	.5340	.0978	.0000	.0000	.0000	.1440	.1114	.0000	.0000	.0000	.0000	
1161	.0000	.1183	.3160	.0051	.1329	.0240	.0007	.0032	.0135	.0946	.1248	.0428	.0000	.0000	.0000	.0170	.0864	.0000	.0062	.0005	.0140	

TABLE 13 (Continued)

TABLE 13p - FF 1037 CLASS

SHIPALY NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
103	.0000	.0677	.4696	.0000	.1102	.0000	.0000	.0494	.0000	.0884	.0781	.0299	.0000	.0034	.0586	.0460	.0000	.0000	.0000	.0000
112	.0000	.1605	.0000	.0100	.1299	.0000	.0000	.0000	.0000	.0000	.0900	.0293	.0000	.0000	.0644	.2915	.0000	.0099	.0000	.2157
134	.0000	.1605	.0059	.0000	.1096	.0000	.0000	.0705	.0000	.2896	.0000	.0137	.0000	.2701	.0137	.0665	.0000	.0000	.0000	.0000

TABLE 13 (Continued)

TABLE 13q - FF 1040 CLASS

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
154	.0000	.3126	.0117	.0135	.2126	.0099	.0120	.0231	.0505	.0232	.1106	.0850	.0000	.0284	.0173	.0739	.0000	.0052	.0010	.0494
159	.0000	.1632	.0950	.0055	.1438	.0252	.0010	.0167	.0500	.0133	.3115	.0246	.0000	.0000	.0337	.0490	.0007	.0000	.0007	.0654
190	.0000	.1424	.1049	.0014	.1540	.0189	.0002	.0395	.0024	.0402	.3303	.0364	.0000	.0000	.0107	.0513	.0000	.0097	.0013	.0397
203	.0000	.1143	.1019	.0025	.0956	.0127	.0246	.0031	.0000	.2145	.0057	.0393	.0000	.1553	.0194	.0376	.0000	.0023	.0012	.0900
232	.0000	.0392	.4457	.0017	.1079	.0117	.0011	.0042	.0030	.0636	.1921	.0716	.0000	.0000	.0077	.0361	.0000	.0030	.0009	.0107
247	.0000	.0506	.0222	.0112	.0740	.0537	.0093	.0410	.0119	.0607	.5398	.0220	.0000	.0000	.0144	.0293	.0000	.0107	.0003	.0411
261	.0000	.0472	.0000	.0025	.1760	.1996	.0000	.0141	.0252	.0109	.3081	.0174	.0000	.0000	.0176	.0210	.0005	.0000	.0009	.0072
274	.0000	.1294	.0054	.0032	.0056	.0130	.0057	.0205	.0000	.3030	.0476	.0757	.0000	.0009	.0620	.1153	.0000	.0000	.0020	.0491
304	.0000	.1015	.0103	.0000	.1027	.0000	.0000	.0411	.0000	.3151	.0000	.0205	.0000	.2671	.0205	.0411	.0000	.0000	.0000	.0000
345	.0000	.1004	.0521	.0000	.1262	.0110	.0000	.1037	.0062	.0520	.2476	.0487	.0000	.0000	.0364	.1070	.0000	.0000	.0219	.0000
392	.0000	.0981	.0322	.0023	.1031	.0230	.0000	.0706	.0241	.0077	.2921	.0664	.0000	.0000	.0353	.0587	.0005	.0000	.0029	.1010
395	.0000	.0406	.0000	.0000	.1042	.1457	.0000	.0769	.0101	.3644	.0000	.0101	.0000	.0000	.0121	.0628	.0000	.0000	.0050	.0000

TABLE 13 (Continued)

TABLE 13r - FF 1052 CLASS

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
1	.0013	.1453	.1234	.0001	.1379	.0163	.0310	.0266	.0011	.1253	.0019	.0420	.0000	.1100	.0256	.0307	.0000	.0039	.0000	.0004
5	.0033	.0551	.1215	.0100	.0496	.0025	.0404	.0455	.0000	.1777	.1053	.0299	.0000	.1001	.0170	.0350	.0000	.0020	.0000	.0697
24	.0000	.2751	.0070	.0039	.1973	.0133	.0220	.0324	.0012	.0521	.1120	.0062	.0000	.0373	.0313	.0730	.0000	.0075	.0011	.0449
42	.0000	.1300	.0343	.0045	.1390	.0297	.0140	.0566	.0550	.0173	.3713	.0194	.0000	.0000	.0102	.0270	.0000	.0027	.0002	.0002
53	.0000	.1055	.0230	.0015	.0670	.0023	.0706	.0155	.0000	.2070	.0130	.0392	.0000	.2909	.0211	.0210	.0000	.0019	.0002	.1105
77	.0000	.2203	.0301	.0004	.1196	.0130	.0100	.0146	.0076	.1256	.1242	.0904	.0000	.0206	.0550	.0703	.0000	.0050	.0017	.0500
70	.0000	.2406	.0107	.0000	.1244	.0027	.0239	.0103	.0000	.1005	.0455	.1402	.0000	.1034	.0151	.0303	.0000	.0050	.0000	.1465
80	.0000	.2472	.1027	.0001	.1557	.0133	.0026	.0032	.0010	.0703	.1219	.0670	.0000	.0072	.0301	.0271	.0000	.0062	.0000	.0564
84	.0000	.1127	.0065	.0133	.0949	.0000	.0346	.0090	.0016	.2144	.0719	.0024	.0000	.1519	.0272	.0444	.0000	.0024	.0011	.0530
87	.0000	.2363	.0524	.0001	.2007	.0067	.0109	.0236	.0006	.1405	.0602	.0201	.0000	.0607	.0174	.0372	.0000	.0055	.0000	.1031
96	.0000	.0730	.2060	.0001	.0963	.0003	.0012	.0019	.0004	.0906	.0907	.1505	.0000	.0022	.0620	.0582	.0000	.0022	.0014	.0711
101	.0000	.1097	.0914	.0027	.1310	.0261	.0119	.0510	.0074	.0260	.3960	.0320	.0000	.0001	.0264	.0357	.0001	.0077	.0005	.0412
114	.0000	.2437	.0454	.0006	.1306	.0503	.0432	.0450	.0067	.0562	.0123	.0302	.0000	.1620	.0105	.0340	.0000	.0060	.0000	.0975
123	.0000	.0603	.0040	.0000	.0612	.0110	.0233	.0100	.0000	.3021	.0767	.0140	.0000	.1201	.0133	.0153	.0000	.0012	.0005	.1004
172	.0000	.0325	.4352	.0000	.0909	.0096	.0064	.0229	.0000	.1171	.1161	.0210	.0000	.0000	.0503	.0310	.0000	.0054	.0000	.0441
200	.0000	.1003	.1593	.0043	.1243	.0410	.0075	.0292	.0064	.0437	.3564	.0305	.0000	.0000	.0107	.0353	.0000	.0099	.0004	.0020
206	.0000	.0671	.0997	.0002	.1067	.0223	.0069	.0290	.0020	.0202	.5303	.0129	.0000	.0000	.0210	.0247	.0000	.0050	.0000	.0510
235	.0000	.2033	.0191	.0000	.1400	.0112	.0021	.0000	.0777	.3003	.0000	.0020	.0000	.0000	.0377	.0194	.0000	.0000	.0000	.0000
230	.0000	.1100	.1416	.0000	.1170	.0031	.0197	.0093	.0000	.1060	.0060	.0420	.0000	.0004	.0239	.0371	.0000	.0029	.0000	.2104
244	.0000	.1473	.0064	.0000	.0994	.0001	.0665	.0000	.0000	.1072	.0026	.0394	.0000	.2003	.0290	.0330	.0000	.0033	.0000	.1667
294	.0000	.1512	.0155	.0000	.0901	.0000	.0000	.0464	.0000	.3044	.0376	.0329	.0000	.1512	.0262	.0590	.0000	.0000	.0000	.0047
295	.0000	.1552	.0397	.0000	.1101	.0027	.0000	.0650	.0000	.3204	.0514	.0325	.0000	.1507	.0200	.0514	.0000	.0000	.0000	.0000



TABLE 13 (Continued)

TABLE 13r (Continued)

SHIPALT NUMBER	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
328	.0000	.1404	.0769	.0037	.0303	.0115	.0294	.0522	.0000	.2140	.0203	.0390	.0000	.0760	.0150	.0406	.0000	.0012	.0003	.1000
349	.0000	.0254	.0254	.0131	.1256	.0023	.0000	.0000	.1360	.0502	.4300	.0000	.0000	.0000	.0175	.0310	.0027	.0000	.0000	.1304
379	.0000	.2200	.0400	.0000	.0900	.0400	.0000	.0850	.0400	.0900	.3000	.0250	.0000	.0000	.0250	.0450	.0000	.0000	.0000	.0000
303	.0000	.2054	.1403	.0000	.1252	.0109	.0000	.1020	.0095	.0707	.1091	.0190	.0000	.0000	.0367	.0016	.0000	.0000	.0014	.0000



TABLE 13 (Continued)

TABLE 13s - FFG 1 CLASS

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
154	.0000	.2597	.0040	.0001	.1882	.0232	.0000	.0000	.0015	.0002	.1001	.0997	.0000	.0651	.0354	.0744	.0000	.0013	.0042	.0549
158	.0000	.1741	.0463	.0065	.1693	.0445	.0057	.0232	.0553	.0036	.3150	.0200	.0000	.0000	.0279	.0602	.0005	.0016	.0005	.0364
177	.0000	.0724	.0201	.0015	.0473	.0133	.0917	.0105	.0000	.2676	.0129	.0342	.0000	.0003	.0200	.0351	.0000	.0000	.0010	.2043
178	.0000	.1092	.1027	.0021	.1202	.0174	.0007	.0330	.0020	.0421	.4111	.0341	.0000	.0006	.0201	.0373	.0000	.0055	.0002	.0520
237	.0000	.0413	.5752	.0000	.1104	.0000	.0000	.0461	.0000	.0720	.0503	.0206	.0000	.0000	.0376	.0376	.0000	.0000	.0000	.0000
258	.0000	.1062	.0252	.0029	.1253	.0507	.0044	.0263	.0131	.0900	.4034	.0366	.0000	.0000	.0221	.0412	.0000	.0000	.0010	.0514
264	.0000	.0256	.0223	.0010	.1608	.1010	.0030	.0242	.1125	.0045	.3177	.0097	.0000	.0000	.0173	.0234	.0001	.0000	.0003	.0070
275	.0000	.0782	.1136	.0117	.0811	.0112	.0332	.0082	.0011	.2962	.0304	.0374	.0000	.0000	.0204	.0423	.0000	.0012	.0000	.1004
276	.0000	.1632	.0045	.0029	.0677	.0105	.0062	.0235	.0000	.2011	.0911	.0332	.0000	.0000	.0237	.1455	.0000	.0730	.0000	.0725
300	.0000	.1015	.0103	.0000	.1027	.0000	.0000	.0411	.0000	.3151	.0000	.0205	.0000	.0671	.0205	.0411	.0000	.0000	.0000	.0000
330	.0000	.1004	.0521	.0000	.1262	.0110	.0000	.1097	.0062	.0520	.2476	.0407	.0000	.0000	.0364	.1070	.0000	.0000	.0219	.0000
345	.0000	.1292	.0860	.0004	.1453	.0146	.0060	.0000	.0039	.0516	.3226	.0372	.0000	.0000	.0362	.0509	.0001	.0000	.0015	.1049
354	.0000	.1637	.0469	.0000	.1104	.0104	.0709	.0066	.0000	.1179	.0000	.0560	.0000	.0000	.0500	.0641	.0000	.0000	.0024	.2751
390	.0000	.1046	.0361	.0016	.1217	.0222	.0060	.0615	.0201	.0672	.2671	.0415	.0000	.0000	.0232	.0626	.0002	.0025	.0014	.1506
410	.0000	.0654	.0500	.0000	.0600	.0141	.0000	.0000	.0000	.3111	.0041	.0663	.0000	.1786	.0756	.0604	.0000	.0000	.0020	.0077

TABLE 13 (Continued)

TABLE 13t - SSBN TYPE

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
188	.0134	.0888	.0144	.0014	.0621	.0753	.0155	.0605	.0000	.0463	.5476	.0011	.0000	.0000	.0025	.0027	.0000	.0002	.0000	.0717
275	.0052	.1274	.0167	.0019	.2236	.0372	.0030	.0087	.0000	.0413	.4337	.0008	.0000	.0000	.0003	.0007	.0000	.0001	.0000	.0994
303	.0204	.0135	.0116	.0000	.1277	.1453	.0398	.1619	.0000	.2323	.2153	.0022	.0000	.0000	.0000	.0000	.0000	.0002	.0000	.0684
306	.0127	.0024	.0000	.0000	.0000	.0911	.1004	.4424	.0000	.0000	.0161	.0004	.0000	.0000	.0101	.0095	.0000	.0000	.0000	.3150
405	.0083	.1780	.0157	.0027	.0950	.0598	.0130	.0513	.0000	.0359	.4660	.0142	.0000	.0000	.0038	.0042	.0000	.0010	.0006	.0504
409	.0000	.3763	.0900	.0057	.2360	.0800	.0000	.0000	.0000	.3146	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0674
419	.0142	.0000	.1408	.0000	.0282	.1023	.0082	.0061	.0000	.6761	.0000	.0254	.0000	.0000	.0000	.0000	.0000	.0017	.0010	.0000
443	.0169	.1421	.0168	.0021	.0737	.0461	.0189	.0701	.0000	.0081	.5592	.0000	.0000	.0000	.0026	.0036	.0000	.0000	.0000	.0520
444	.0107	.0882	.0981	.0013	.0597	.0774	.0032	.0846	.0000	.6311	.0000	.0000	.0000	.0000	.0044	.0041	.0000	.0000	.0000	.0171
493	.0017	.0858	.0015	.0013	.0659	.0126	.0045	.0189	.0000	.0000	.3399	.6254	.0000	.0000	.0241	.0226	.0000	.0430	.0257	.0320
507	.0063	.2358	.0052	.0036	.2328	.0454	.0201	.0851	.0000	.0254	.2590	.0028	.0000	.0000	.0167	.0172	.0000	.0060	.0001	.0306
890	.0046	.2621	.0264	.0040	.1171	.0329	.0080	.0310	.0000	.0515	.4029	.0108	.0000	.0010	.0070	.0107	.0000	.0007	.0305	.0269
924	.0310	.0908	.0012	.0014	.0345	.2299	.0177	.0515	.0000	.0069	.3950	.0000	.0000	.0000	.0068	.0065	.0000	.0000	.0000	.0661
927	.0050	.2644	.2346	.0040	.1170	.0359	.0121	.0503	.0000	.0692	.1407	.0375	.0000	.0000	.0083	.0085	.0000	.0026	.0015	.0075
931	.0130	.2761	.0137	.0045	.1471	.1005	.0149	.0633	.0794	.0046	.2104	.0107	.0000	.0000	.0133	.0083	.0000	.0024	.0004	.0390
975	.0024	.1532	.0005	.0022	.1805	.0225	.0132	.0760	.2042	.0583	.1514	.0390	.0000	.0000	.0139	.0040	.0000	.0090	.0010	.0709
1011	.0597	.1727	.0061	.0026	.0439	.4298	.0448	.1489	.0000	.0000	.0000	.0149	.0000	.0000	.0057	.0261	.0000	.0010	.0006	.0433
1022	.0023	.2958	.0300	.0043	.2136	.0166	.0009	.0011	.0000	.0000	.2090	.1905	.0000	.0000	.0117	.0112	.0000	.0137	.0077	.0137
1054	.0039	.3116	.0104	.0052	.1885	.0463	.0155	.0724	.0052	.0752	.1057	.0273	.0000	.0221	.0182	.0213	.0000	.0044	.0010	.0449
1135	.0039	.1425	.0335	.0022	.0542	.0276	.0231	.1011	.0000	.1516	.4340	.0068	.0000	.0001	.0017	.0035	.0000	.0005	.0003	.0135
1143	.0039	.1489	.0727	.0130	.1159	.2290	.0057	.0698	.0068	.0131	.2019	.0117	.0000	.0012	.0097	.0045	.0000	.0041	.0009	.0984
1151	.0031	.3923	.0106	.0043	.1684	.0056	.0412	.0437	.0008	.0573	.0070	.0493	.0000	.0387	.0514	.0704	.0000	.0037	.0017	.0172

TABLE 13 (Continued)

TABLE 13t (Continued)

SHIPALT NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
1171	.0024	.1340	.0329	.0017	.0553	.0185	.0369	.0642	.0000	.1420	.2815	.0073	.0000	.1247	.0039	.0015	.0000	.0005	.0003	.0526
1173	.0007	.2030	.0014	.0031	.0949	.0048	.0873	.0175	.0000	.2101	.0141	.0008	.0000	.3485	.0061	.0056	.0000	.0000	.0000	.0020
1177	.0119	.0900	.0023	.0014	.0759	.0866	.0221	.0892	.0000	.0273	.5279	.0141	.0000	.0000	.0020	.0020	.0000	.0011	.0005	.0457
1185	.0121	.1680	.0096	.0022	.1809	.0879	.0332	.1370	.0000	.0706	.2713	.0026	.0000	.0000	.0069	.0052	.0000	.0000	.0000	.0142
1196	.0041	.1759	.2298	.0028	.0897	.0302	.0294	.0298	.0000	.2454	.0408	.0006	.0000	.0918	.0057	.0069	.0000	.0000	.0000	.0171
1273	.0032	.1637	.0346	.0026	.1013	.0658	.0108	.0405	.0000	.1611	.3289	.0090	.0000	.0000	.0102	.0103	.0000	.0006	.0003	.0510
1342	.0056	.0438	.0000	.0007	.0902	.0404	.0097	.0388	.0000	.0039	.7130	.0012	.0000	.0000	.0003	.0003	.0000	.0001	.0000	.0520
1376	.0059	.2153	.0580	.0032	.0638	.0419	.0490	.1241	.0000	.1182	.0046	.0325	.0000	.0852	.0166	.0478	.0000	.0023	.0014	.1315
1443	.0098	.0421	.0010	.0006	.1902	.0703	.0044	.0111	.0000	.0000	.4930	.0009	.0000	.0000	.0000	.0000	.0000	.0001	.0000	.1765
1459	.0067	.2193	.2272	.0033	.1226	.0481	.0056	.0135	.0000	.1929	.0777	.0307	.0000	.0856	.0172	.0205	.0000	.0021	.0013	.0057

TABLE 13 (Continued)

TABLE 13u - SSN TYPE

SHIP NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 91	SHIP 94	SHIP 99	OTHER
535	.0000	.0677	.0567	.0157	.0660	.1410	.0042	.0281	.0028	.0000	.5279	.0011	.0000	.0000	.0000	.0000	.0000	.0017	.0011	.0722
560	.0031	.1442	.0110	.0111	.1022	.1076	.0019	.1049	.0576	.0373	.2255	.0134	.0000	.0000	.0000	.0176	.0000	.0067	.0009	.0394
644	.0016	.1125	.0277	.0023	.0645	.0622	.0052	.0329	.0122	.0000	.4666	.0329	.0000	.0000	.0000	.0000	.0000	.0045	.0003	.1292
722	.0030	.1323	.3231	.0020	.0958	.0214	.0132	.0285	.0000	.1015	.1692	.0113	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0608
790	.0148	.1637	.0740	.0025	.1793	.1066	.0248	.0530	.0000	.1400	.0273	.0318	.0000	.0423	.0076	.0073	.0000	.0043	.0013	.1195
827	.0054	.2049	.0521	.0031	.1206	.1109	.0397	.1173	.0000	.0636	.1426	.0121	.0000	.0446	.0034	.0012	.0000	.0000	.0000	.0653
852	.0055	.2666	.0304	.0022	.2163	.0429	.0000	.0957	.0000	.0962	.0423	.0247	.0000	.0000	.0676	.0246	.0000	.0000	.0016	.0770
1007	.0006	.1537	.2063	.0023	.0599	.0041	.0369	.0073	.0000	.2589	.0051	.0092	.0000	.1518	.0039	.0088	.0000	.0006	.0004	.0452
1042	.0047	.2214	.0037	.0034	.1016	.0341	.0149	.0014	.0000	.0307	.3432	.0092	.0000	.0000	.0104	.0034	.0000	.0006	.0004	.0468
1053	.0015	.3302	.0042	.0105	.1298	.0163	.0045	.0176	.0000	.0075	.3499	.0030	.0000	.0000	.0000	.0000	.0000	.0043	.0001	.0591
1176	.0012	.2671	.0232	.0032	.1450	.0396	.0051	.0223	.0000	.0033	.3366	.0357	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0302
1242	.0030	.1072	.0000	.0029	.0920	.0214	.0109	.0455	.0000	.0209	.4725	.0126	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.1122
1291	.0055	.2113	.0624	.0050	.1091	.0551	.0288	.0277	.0007	.1738	.0612	.0282	.0000	.0025	.0124	.0159	.0000	.0049	.0015	.1044
1299	.0014	.2201	.0707	.0063	.1676	.0399	.0026	.0088	.0026	.0068	.2295	.1584	.0000	.0001	.0265	.0122	.0000	.0073	.0032	.0284
1319	.0059	.0599	.0774	.0015	.0334	.1428	.0630	.0776	.0000	.1678	.0384	.0129	.0000	.1464	.0083	.0082	.0000	.0008	.0002	.1104
1377	.0071	.1932	.0231	.0032	.1951	.0812	.0141	.0441	.0000	.1136	.2263	.0103	.0000	.0099	.0077	.0077	.0000	.0035	.0000	.0558
1363	.0006	.0643	.0975	.0010	.0271	.0040	.0347	.0200	.0000	.1330	.0108	.0038	.0000	.1262	.0025	.0023	.0000	.0003	.0002	.4713
1368	.0035	.1733	.0422	.0026	.0711	.0251	.0250	.0088	.0000	.3142	.0016	.0240	.0000	.0035	.0060	.0163	.0000	.0017	.0010	.1944
1457	.0013	.1521	.1170	.0016	.1054	.0239	.0348	.0357	.0000	.1979	.1041	.0286	.0000	.1135	.0074	.0340	.0000	.0013	.0004	.0509
1458	.0004	.0966	.1230	.0043	.0608	.0215	.0211	.0224	.0004	.4271	.0301	.0097	.0000	.0465	.0090	.0119	.0000	.0004	.0002	.2942
1475	.0023	.3418	.0114	.0046	.3036	.0328	.0109	.0238	.0002	.0162	.0075	.1161	.0000	.0030	.0154	.0176	.0004	.0162	.0038	.0304
1480	.0000	.0620	.0310	.0000	.0543	.0000	.0000	.0930	.0000	.3101	.0008	.0000	.0000	.0000	.0000	.0445	.0000	.0000	.0000	.0000



TABLE 13 (Continued)

TABLE 13u (Continued)

SHIPALT NUMBER	06	11	17	23	26	31	36	38	41	51	56	64	65	67	71	72	81	94	99	OTHER
1481	.0027	.1592	.1548	.0024	.0627	.0194	.0524	.0139	.0000	.1209	.0351	.0112	.0000	.2043	.0344	.0041	.0000	.0000	.0005	.1513
1482	.0000	.3027	.0142	.0033	.4125	.0331	.0057	.0005	.0004	.0269	.0064	.0954	.0000	.0260	.0204	.0459	.0008	.0011	.0017	.0030
1486	.0089	.1350	.0200	.0021	.0958	.0640	.0506	.1192	.0000	.1166	.0931	.0271	.0000	.0941	.0864	.0060	.0000	.0019	.0011	.1582
1561	.0052	.1712	.0714	.0041	.0972	.0469	.0433	.0093	.0000	.1775	.0160	.0153	.0000	.1710	.0101	.0145	.0000	.0021	.0005	.1441
1616	.0030	.3251	.0078	.0068	.2807	.0587	.0038	.0112	.0382	.0116	.1620	.0021	.0000	.0000	.0143	.0195	.0000	.0033	.0003	.0514
1663	.0030	.1149	.0255	.0000	.1277	.0340	.0000	.1021	.0170	.1021	.3064	.0511	.0000	.0000	.0255	.0000	.0000	.0000	.0000	.0916
1756	.0054	.2738	.0260	.0042	.1939	.0390	.0306	.1165	.0000	.0641	.0353	.0067	.0000	.0158	.0014	.0014	.0000	.0005	.0003	.1650
1834	.0039	.0746	.1162	.0011	.0933	.0277	.0161	.0420	.0000	.0278	.5471	.0011	.0000	.0003	.0044	.0044	.0000	.0019	.0000	.1441
1837	.0000	.0000	.0000	.0000	.0077	.0000	.0102	.0460	.0000	.0000	.3444	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.5918



TABLE 13v - AOR TYPE

[illegible]

TABLE 13 (Continued)

TABLE 13W - AS TYPE

SHIPALY NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
1119	.0000	.1123	.0183	.0048	.1173	.0794	.0054	.0232	.0665	.0000	.4524	.0266	.0000	.0000	.0155	.0420	.0000	.0173	.0083	.0197
1164	.0000	.1319	.0000	.0056	.1000	.0010	.0112	.0417	.0000	.6499	.0000	.0194	.0000	.0000	.0152	.0041	.0000	.0000	.0002	.0203
1203	.0000	.1432	.0191	.0079	.1498	.0187	.0052	.0202	.0000	.1748	.2207	.0611	.0000	.0000	.0000	.0221	.0592	.0000	.0087	.0898
1262	.0000	.2001	.0021	.0086	.2120	.0721	.0266	.1020	.0000	.0464	.0000	.0668	.0000	.0000	.1233	.0807	.0000	.0000	.0006	.0567
1264	.0000	.0299	.3730	.0013	.0754	.0136	.0022	.0087	.0013	.0731	.3520	.0146	.0000	.0000	.0100	.0232	.0000	.0072	.0002	.0143
1265	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.5790	.0000	.0000	.0000	.4139	.0000	.0000	.0070	.0000
1280	.0000	.3230	.0000	.0139	.2400	.0024	.0064	.0314	.0000	.2477	.0000	.0695	.0000	.0000	.0433	.0153	.0000	.0000	.0008	.0044
1284	.0000	.0952	.0315	.0041	.1212	.0508	.0110	.0432	.0024	.0232	.4262	.0392	.0000	.0000	.0000	.0571	.0886	.0000	.0027	.0004
1331	.0000	.1497	.0731	.0064	.1496	.0091	.0000	.0003	.0000	.0331	.1567	.2611	.0000	.0000	.0349	.0644	.0000	.0090	.0031	.0100

SHIPALY  
NUMBER  
-----  
459 .0  
473 .0  
478 .0  
496 .0  
551 .0  
564 .0  
571 .0  
576 .0  
9051 .0

TABLE 13 (Continued)

TABLE 13x - LCC TYPE

SHIPALTY NUMBER	SHIP 06	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 81	SHIP 94	SHIP 99	OTHER
605	.0000	.0579	.0397	.0000	.0499	.0163	.0000	.0019	.0000	.3504	.0860	.0309	.0000	.1606	.0251	.0775	.0000	.0000	.0013	.0857
606	.0000	.0999	.0430	.0000	.0790	.0211	.0343	.0000	.0000	.2727	.1780	.0259	.0000	.1226	.0249	.0137	.0000	.0043	.0011	.1074
620	.0000	.1246	.0351	.0001	.1476	.0134	.0000	.0507	.0009	.0339	.3509	.0696	.0000	.0000	.0546	.0626	.0000	.0000	.0029	.0530
621	.0000	.1103	.0294	.0072	.1290	.0202	.0000	.0281	.0749	.0026	.3389	.0212	.0600	.0000	.0521	.0702	.0015	.0000	.0009	.1136
630	.0000	.0317	.0432	.0000	.0648	.0230	.0539	.0000	.0000	.4344	.0150	.0135	.0000	.1272	.0271	.0241	.0000	.0000	.0006	.0755
634	.0000	.0766	.1090	.0000	.0798	.0176	.0000	.0000	.0000	.3819	.0820	.0563	.0000	.0000	.0417	.0787	.0000	.0000	.0023	.0732
642	.0000	.0586	.0263	.0003	.0521	.0147	.0000	.0000	.0000	.3203	.0743	.1205	.0000	.0657	.0325	.0438	.0001	.0000	.0050	.1165
643	.0000	.0571	.0346	.0000	.0456	.0155	.0000	.0000	.0000	.3410	.0300	.0374	.0000	.1895	.0338	.0258	.0000	.0014	.0016	.1267
664	.0000	.1500	.1187	.0000	.0759	.0127	.0600	.0049	.0000	.2623	.0642	.0711	.0000	.0911	.0336	.0517	.0000	.0000	.0030	.0940
681	.0000	.1746	.1014	.0000	.0972	.0119	.0000	.0009	.0000	.2376	.0050	.0621	.0000	.1695	.0316	.0450	.0000	.0000	.0026	.0589
684	.0000	.0996	.1168	.0000	.0733	.0165	.0000	.0000	.0000	.3426	.0301	.0410	.0000	.0885	.0333	.0484	.0000	.0000	.0017	.1082
701	.0000	.1109	.0000	.0000	.0519	.0123	.0000	.0000	.0000	.2666	.0824	.0375	.0000	.0000	.0154	.0680	.0000	.0000	.0016	.1532
770	.0000	.2006	.0535	.0000	.1362	.0134	.0097	.0000	.0000	.0795	.0002	.0280	.0000	.0212	.0384	.0365	.0000	.0000	.0012	.3812

TABLE 13 (Continued)

TABLE 13y - LPH TYPE

SHIPALT NUMBER	SHOP 06	SHOP 11	SHOP 17	SHOP 23	SHOP 26	SHOP 31	SHOP 36	SHOP 38	SHOP 41	SHOP 51	SHOP 56	SHOP 64	SHOP 65	SHOP 67	SHOP 71	SHOP 72	SHOP 81	SHOP 94	SHOP 99	OTHER
278	.0000	.0916	.0415	.0003	.0624	.0099	.0051	.0201	.0049	.0285	.5270	.0284	.0000	.0005	.0246	.0220	.0000	.0009	.0006	.1220
289	.0000	.1190	.0361	.0000	.0719	.0062	.0337	.0207	.0000	.1301	.1122	.0562	.0000	.1200	.0106	.0540	.0000	.0026	.0000	.1929
320	.0000	.0937	.0185	.0019	.0632	.0247	.0109	.0460	.0309	.0063	.4793	.0127	.0000	.0000	.0064	.0310	.0000	.0001	.0000	.1570
321	.0002	.0775	.2465	.0000	.1173	.0056	.0043	.0136	.0001	.1306	.0721	.0415	.0000	.0004	.0655	.0375	.0000	.0021	.0000	.1772
341	.0100	.0726	.0117	.0000	.0515	.0116	.0077	.0306	.0000	.0765	.3563	.0356	.0000	.0000	.0365	.0679	.0000	.0561	.0000	.1053
388	.0000	.0631	.2427	.0000	.1086	.0063	.0027	.0006	.0000	.0706	.0022	.0762	.0000	.0004	.0430	.0397	.0000	.0022	.0000	.2534
401	.0003	.1000	.0300	.0000	.1402	.0001	.0554	.0225	.0000	.0000	.1532	.1603	.0000	.0000	.0299	.1276	.0000	.0165	.0000	.1474
436	.0000	.0055	.0450	.0000	.0545	.0110	.0371	.0220	.0000	.2605	.0560	.0361	.0000	.1404	.0160	.0170	.0000	.0019	.0000	.1993
443	.0000	.0220	.0000	.0000	.0162	.0004	.0166	.0652	.0000	.0061	.0116	.0009	.0000	.0039	.0061	.0759	.0030	.0005	.0000	.7700
455	.0000	.1135	.0360	.0063	.1474	.0352	.0001	.0312	.1330	.1343	.1252	.0200	.0000	.0000	.0566	.0562	.0000	.0050	.0000	.0022
459	.0000	.0521	.0304	.0000	.0430	.0092	.0574	.0197	.0000	.2964	.0132	.0640	.0000	.2527	.0107	.0206	.0000	.0012	.0000	.1277
510	.0000	.0714	.0000	.0000	.0690	.0035	.0346	.0302	.0000	.2453	.1110	.0409	.0000	.1170	.0261	.0165	.0000	.0034	.0000	.2217
555	.0000	.0993	.1916	.0002	.1392	.0100	.0072	.0200	.0044	.0409	.1610	.1039	.0000	.0001	.0717	.0650	.0000	.0053	.0000	.0690

SHIPALT  
NUMBER

332  
358  
1005  
1009  
1011  
1012  
1014  
1015  
1021  
1024  
1030  
1031  
1035  
1048  
1055  
1093  
1104  
1122  
1123  
1136  
1145  
1161

TABLE 13 (Continued)

TABLE 13z - LST TYPE

SHIPALT NUMBER	SHIP 86	SHIP 11	SHIP 17	SHIP 23	SHIP 26	SHIP 31	SHIP 36	SHIP 38	SHIP 41	SHIP 51	SHIP 56	SHIP 64	SHIP 65	SHIP 67	SHIP 71	SHIP 72	SHIP 91	SHIP 94	SHIP 99	OTHER
31	.0000	.0775	.2938	.0000	.0978	.0034	.0000	.0000	.0000	.0744	.1096	.0798	.0000	.0000	.1478	.0778	.0000	.0000	.0033	.0348
41	.0000	.0770	.0000	.0000	.0308	.0129	.0000	.0000	.0000	.2062	.0507	.0795	.0000	.1003	.0203	.3609	.0000	.0000	.0033	.0560
53	.0000	.1122	.0566	.0055	.1338	.0368	.0000	.0337	.0569	.0019	.3370	.0362	.0000	.0000	.0248	.0645	.0011	.0020	.0015	.0943
54	.0000	.1659	.0486	.0000	.1460	.0098	.0000	.0176	.0004	.0420	.3164	.0465	.0000	.0000	.0799	.0342	.0000	.0000	.0019	.0306



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